

**\$350,000,000**

**PUBLIC FACILITIES FINANCING AUTHORITY  
OF THE CITY OF SAN DIEGO  
SEWER REVENUE BONDS, SERIES 1995**

**(Payable Solely From Installment Payments Secured By Wastewater System Net Revenues)**

**Dated, priced, due and bearing interest as set forth on the inside cover page.**

*This cover page contains certain information for general reference only. It is not a summary of the issue. Investors are advised to read the entire Official Statement to obtain information essential to the making of an informed decision.*

*The Series 1995 Bonds are issuable as fully registered bonds and when initially issued will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). Purchases of the Series 1995 Bonds will be made in book-entry form only, in the denominations as set forth in the inside cover of this Official Statement, through brokers and dealers who are, or who act through, DTC Participants. Beneficial Owners of the Series 1995 Bonds will not be entitled to receive physical delivery of bond certificates so long as DTC or a successor securities depository acts as the securities depository with respect to the Series 1995 Bonds. So long as DTC or its nominee is the registered owner of the Series 1995 Bonds, reference herein to Bondholders or registered owners shall mean Cede & Co., as aforesaid, and payments of principal of and interest on the Series 1995 Bonds will be made directly to DTC by State Street Bank and Trust Company of California, N.A., as Trustee and Paying Agent. Disbursement of such payments to DTC participants is the responsibility of DTC and disbursement of such payments to the Beneficial Owners is the responsibility of DTC participants. See "DESCRIPTION OF THE SERIES 1995 BONDS — Book-Entry-Only System."*

*Proceeds of the Series 1995 Bonds are to be applied (i) to pay design, engineering, land acquisition and construction costs of certain capital improvements to the Metropolitan System of the City of San Diego (the "City"), (ii) to fund a debt service reserve fund and (iii) to pay certain costs of issuance.*

*The payment of principal of and interest on the Series 1995 Bonds when due will be insured by a municipal bond insurance policy to be issued simultaneously with the delivery of the Series 1995 Bonds by Financial Guaranty Insurance Company. See "SECURITY FOR THE SERIES 1995 BONDS — Bond Insurance" and "APPENDIX G — SPECIMEN MUNICIPAL BOND INSURANCE POLICY."*



**Financial Guaranty Insurance  
Company**

Service mark used by Financial Guaranty Insurance Company, a private company not affiliated with any U.S. government agency

*The Series 1995 Bonds are special, limited obligations of the Authority payable solely from and secured by Installment Payments to be made by the City to the Public Facilities Financing Authority of the City of San Diego (the "Authority") from Net System Revenues pledged and assigned pursuant to an Installment Purchase Agreement, as amended and supplemented by the 1995-1 Supplement to the Master Installment Purchase Agreement, between the Authority and the City. The Series 1995 Bonds are issued on a parity with the Authority's Sewer Revenue Bonds, Series 1993. So long as certain conditions are met, the City has the right to transfer the Metropolitan System facilities to a successor entity. Upon such transfer, the City's obligation to make Installment Payments relating to the Metropolitan System will be assumed by such successor entity and the City will no longer be responsible for such obligations. See "POSSIBLE TRANSFER OF OWNERSHIP OF METROPOLITAN SYSTEM."*

**THE OBLIGATION OF THE CITY TO MAKE INSTALLMENT PAYMENTS DOES NOT CONSTITUTE AN OBLIGATION OF THE CITY FOR WHICH THE CITY IS OBLIGATED TO LEVY OR PLEDGE ANY FORM OF TAXATION OR FOR WHICH THE CITY HAS LEVIED OR PLEDGED ANY FORM OF TAXATION. NEITHER THE PLEDGE MADE BY THE AUTHORITY, NOR THE OBLIGATION OF THE CITY TO MAKE INSTALLMENT PAYMENTS, CREATES A LEGAL OR EQUITABLE PLEDGE, CHARGE, LIEN OR ENCUMBRANCE UPON ANY OF THE CITY'S PROPERTY, OR UPON ITS INCOME, RECEIPTS OR REVENUES OTHER THAN NET SYSTEM REVENUES. THE AUTHORITY HAS NO TAXING POWER.**

*The Series 1995 Bonds are subject to optional and mandatory redemption prior to maturity as described herein.*

*In the opinion of Orrick, Herrington & Sutcliffe, Los Angeles, California and Lofton, De Lancie & Nelson, San Francisco, California, Co-Bond Counsel, based upon an analysis of existing laws, regulations, rulings and court decisions and assuming, among other matters, compliance with certain covenants, interest on the Series 1995 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from State of California personal income taxes. In the further opinion of Co-Bond Counsel, interest on the Series 1995 Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, although Co-Bond Counsel observe that such interest is included in adjusted current earnings in calculating corporate alternative minimum taxable income. Co-Bond Counsel express no opinion regarding any other tax consequences related to the ownership or disposition of, or the accrual or receipt of interest on, the Series 1995 Bonds. See "TAX MATTERS."*

*The Series 1995 Bonds will be offered when, as and if issued and received by the Underwriters, subject to the approval of validity by Orrick, Herrington & Sutcliffe, Los Angeles, California and Lofton, De Lancie & Nelson, San Francisco, California, Co-Bond Counsel, and to certain other conditions. Certain legal matters in connection with the Series 1995 Bonds will be passed upon by John W. Witt, Esq., City Attorney of the City of San Diego and General Counsel to the Authority and Orrick, Herrington & Sutcliffe, Los Angeles, California, Disclosure Counsel. It is expected that the Series 1995 Bonds will be available for delivery through DTC in New York, New York, on or about December 13, 1995.*

**MORGAN STANLEY & CO.**  
Incorporated

**EVEREN SECURITIES, INC.**

**RAUSCHER PIERCE REFSNES, INC.**

**CHARLES A. BELL SECURITIES CORP.**

**RENGE SECURITIES & CO., INC.**

**MURIEL SIEBERT & CO., INC.**

## MATURITIES, AMOUNTS, INTEREST RATES AND YIELDS

**Dated: December 1, 1995**

**Due: May 15, as shown below**

*Interest on the Series 1995 Bonds accrues from their date and is payable on May 15 and November 15 of each year, commencing on May 15, 1996, to the registered owner on the applicable record date, which is the 15th day preceding the interest payment date. The Series 1995 Bonds are available in denominations of \$5,000 or any integral multiple thereof.*

### \$167,900,000 Series 1995 Serial Bonds

<u>Year</u>	<u>Amount</u>	<u>Interest Rate</u>	<u>Price or Yield</u>	<u>Year</u>	<u>Amount</u>	<u>Interest Rate</u>	<u>Price or Yield</u>
1998	\$ 6,140,000	3.900%	3.950%	2007	\$ 9,205,000	6.000%	4.850%
1999	6,380,000	4.000	4.100	2008	9,760,000	4.875	4.950
2000	6,635,000	4.100	4.200	2009	10,235,000	4.875	5.050
2001	6,910,000	4.250	4.300	2010	10,730,000	5.000	5.100
2002	7,200,000	4.300	4.400	2011	11,270,000	5.150	100
2003	7,510,000	4.375	4.500	2012	11,850,000	5.150	5.180
2004	7,840,000	4.500	4.600	2013	12,460,000	5.200	100
2005	8,195,000	6.000	4.700	2014	13,105,000	5.200	5.210
2006	8,685,000	6.000	4.775	2015	13,790,000	5.000	5.220

**\$80,000,000 5.000% Series 1995 Term Bonds Due May 15, 2020 @ 5.28%**

**\$102,100,000 5.000% Series 1995 Term Bonds Due May 15, 2025 @ 5.31%**

**(Plus accrued interest from December 1, 1995)**

**No dealer, broker, salesperson or other person has been authorized by the City of San Diego, the Public Facilities Financing Authority of the City of San Diego or the Underwriters to give any information or to make any representations other than those contained herein and, if given or made, such other information or representation must not be relied upon as having been authorized by the City of San Diego, the Public Facilities Financing Authority of the City of San Diego or the Underwriters. Neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the City of San Diego or the Public Facilities Financing Authority of the City of San Diego. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Series 1995 Bonds by a person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale.**

**This Official Statement is not to be construed as a contract with the purchasers of the Series 1995 Bonds. Statements contained in this Official Statement which involve estimates, forecasts or matters of opinion, whether or not expressly so described herein, are intended solely as such and are not to be construed as representations of facts.**

**The information set forth in this Official Statement has been obtained from official sources and other sources which are believed to be reliable, but it is not guaranteed as to accuracy or completeness, and is not to be construed as a representation by the Underwriters. The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder shall under any circumstances create any implication that there has been no change in the affairs of the City of San Diego, the Public Facilities Financing Authority of the City of San Diego or the Wastewater System since the date hereof. This Official Statement is submitted in connection with the sale of the Series 1995 Bonds referred to herein and may not be reproduced or used, in whole or in part, for any other purpose.**

**The summaries and references to the Indenture, the Installment Purchase Agreement, the Continuing Disclosure Agreement, the City Charter and to other statutes and documents referred to herein do not purport to be comprehensive or definitive and are qualified in their entirety by reference to each such statute and document. This Official Statement including any amendment or supplement hereto is intended to be deposited with one or more depositories. The 1995 Bonds have not been registered under the Securities Act of 1933, as amended, in reliance upon an exemption from the registration requirements contained in such act.**

**IN CONNECTION WITH THIS OFFERING OF THE SERIES 1995 BONDS, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS THAT STABILIZE OR MAINTAIN THE MARKET PRICE OF SUCH BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.**

# **CITY OF SAN DIEGO**

## **CITY COUNCIL**

Susan Golding, *Mayor*

Harry Mathis — District 1  
Byron Wear — District 2  
Christine Kehoe — District 3  
George Stevens — District 4

Barbara Warden — District 5  
Valerie Stallings — District 6  
Judy McCarty — District 7  
Juan Vargas, *Deputy Mayor* — District 8

## **CITY OFFICIALS**

Jack McGrory  
*City Manager*

Ed Ryan  
*City Auditor and Comptroller*

Charles Abdelnour  
*City Clerk*

John W. Witt  
*City Attorney*

Patricia T. Frazier  
*Financial Management Director*

Conny M. Jamison  
*City Treasurer*

## **PUBLIC FACILITIES FINANCING AUTHORITY OF THE CITY OF SAN DIEGO**

### **BOARD OF DIRECTORS**

Jack McGrory  
*Chairman*

John W. Witt  
*Vice Chairman*

Ed Ryan  
*Secretary/Treasurer*

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### **CO-BOND COUNSEL**

Orrick, Herrington & Sutcliffe  
*Los Angeles, California*

Lofton, De Lancie & Nelson  
*San Francisco, California*

### **DISCLOSURE COUNSEL**

Orrick, Herrington & Sutcliffe  
*Los Angeles, California*

### **TRUSTEE**

State Street Bank and Trust Company  
of California, N.A.  
*Los Angeles, California*

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### **FINANCIAL ADVISORS**

Public Resources Advisory Group  
*Los Angeles, California*

Whitfield, Inc.  
*Poulsbo, Washington*

### **CONSULTING ENGINEER**

High-Point Rendel  
*San Diego, California*

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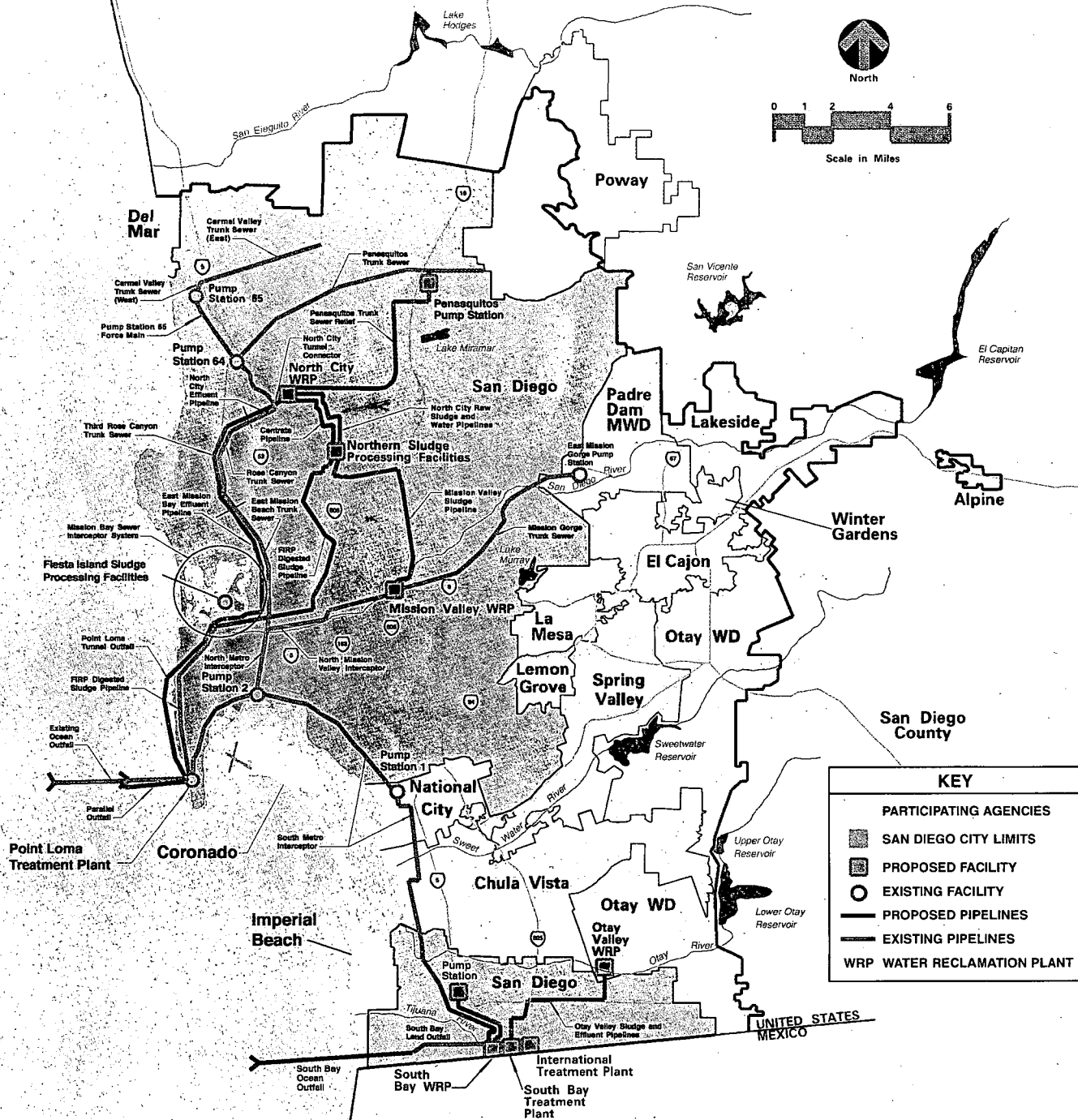


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# Metropolitan Sewerage System

## Existing and Planned Facilities

### Metropolitan Wastewater Plan



## **SUMMARY STATEMENT**

This Summary Statement is qualified in all respects by the more complete information contained elsewhere in this Official Statement, including the Appendices. This Official Statement should be read in its entirety, and no one subject discussed herein should be considered less important than any other by reason of its location in the text. Unless otherwise defined below, all capitalized terms used in this Summary Statement shall have the meanings ascribed thereto in Appendix D to this Official Statement.

### **City of San Diego**

The City is the sixth largest city in the United States and the second largest city in the State of California. The City's estimated population for 1995 is approximately 1.2 million.

### **The San Diego Wastewater System**

The Wastewater System is owned and operated by the City under the administration of the Water Utilities Department and the Metropolitan Wastewater Department and consists of the Municipal System and Metropolitan System. The Municipal System provides sewage collection within the City and consists of over 2,498 miles of municipal sewer mains and 102 sewer and storm water pumping stations within the City. The Metropolitan System provides sewage transportation, treatment and disposal services to more than 1.9 million residents within a regional service area which encompasses the City and 14 Participating Agencies (eight incorporated cities and six districts). The communities and agencies served by the Wastewater System form the second largest integrated metropolitan area in the State of California surpassed only by the Los Angeles metropolitan area. See "WASTEWATER SYSTEM."

The operations of the Wastewater System are accounted for in a separate enterprise fund — the Sewer Revenue Fund. All Wastewater System Revenues are deposited in the Sewer Revenue Fund. The Installment Payments relating to the Series 1995 Bonds and the Outstanding Parity Bonds (defined herein) are, and any Parity Obligations will be, secured by Net System Revenues.

### **The Authority**

The Authority is a joint powers authority created by the City and its Redevelopment Agency to engage in financing activities. The Authority has no taxing power. See "THE AUTHORITY."

### **Purpose of the Financing**

The Series 1995 Bonds are being issued (i) to pay design, engineering, land acquisition and construction costs of certain capital improvements to the Metropolitan System, (ii) to fund a debt service reserve fund, and (iii) to pay certain costs of issuance.

### **The Series 1995 Bonds**

The Series 1995 Bonds will be issued in the aggregate principal amount of \$350,000,000. The Series 1995 Bonds shall be in denominations of \$5,000 and any integral multiple thereof.

### **Redemption Provisions**

The Series 1995 Bonds may be subject to optional redemption with the redemption premiums described herein, and the Series 1995 Bonds designated as Term Bonds will be subject to mandatory redemption, all as more fully described herein. See "DESCRIPTION OF THE SERIES 1995 BONDS."

### **Security for the Series 1995 Bonds**

The Series 1995 Bonds are payable solely from Installment Payments from a pledge and lien on Net System Revenues by the City to the Authority under the Installment Purchase Agreement. Net System Revenues are System Revenues less Maintenance and Operation Costs of the Wastewater System.

The City has covenanted in the Installment Purchase Agreement not to discontinue or suspend any Installment Payments whether or not the Project or any part thereof is operating or operable or has been completed, or its use is suspended, interfered with, reduced, curtailed or terminated in whole or in part, and such Installment Payments shall not be subject to reduction whether by offset or otherwise and shall not be conditional upon the performance or non-performance by any party of any agreement for any cause whatsoever.

The obligation of the City to make Installment Payments does not constitute an obligation of the City for which the City is obligated to levy or pledge any form of taxation, or for which the City has levied or pledged any form of taxation. Neither the pledge of the Authority, nor the obligation of the City to make Installment Payments, creates a legal or equitable pledge, charge, lien or encumbrance upon any of the City's property, or upon its income, receipts or revenues other than Net System Revenues. The Authority has no taxing power. See "SECURITY FOR THE SERIES 1995 BONDS."

### **Bond Insurance**

The payment of principal of and interest on the Series 1995 Bonds when due will be insured by a municipal bond insurance policy to be issued simultaneously with the delivery of the Series 1995 Bonds by Financial Guaranty Insurance Company. See "SECURITY FOR THE SERIES 1995 BONDS — Bond Insurance" and "APPENDIX G — SPECIMEN MUNICIPAL BOND INSURANCE POLICY."

### **Rate Covenant**

The City has covenanted in the Installment Purchase Agreement to fix, prescribe and collect rates and charges for the Wastewater System which will be at least sufficient during each fiscal year to pay all Obligations (other than Parity Obligations) and to provide Net System Revenues equal to 120% of the Debt Service for such fiscal year. Net System Revenues may be increased or reduced by transfers in or out of the Rate Stabilization Fund. See "SECURITY FOR THE SERIES 1995 BONDS."

### **Reserve Fund**

A Reserve Fund has been established from the proceeds of the Series 1995 Bonds and the Outstanding Parity Bonds in an amount equal to the Reserve Requirement. The Reserve Requirement, as of any date of calculation, shall be the least of (i) 10% of the proceeds of the Series 1995 Bonds and the Outstanding Parity Bonds, (ii) Maximum Annual Debt Service on the Series 1995 Bonds and the Outstanding Parity Bonds for the then current or any future fiscal year, or (iii) 125% of average Annual Debt Service on the Series 1995 Bonds and the Outstanding Parity Bonds.

### **Outstanding Parity Bonds**

The City has outstanding \$242,785,000 in Parity Obligations incurred in connection with the issuance of the Authority's \$250,000,000 original aggregate principal amount of Sewer Revenue Bonds, Series 1993 (Payable Solely From Installment Payments Secured By Wastewater System Net Revenues) (the "Outstanding Parity Bonds").

### **Additional Parity Obligations**

The City may at any time issue or create other Parity Obligations on a parity with the Installment Payments pledged to the payment of the Series 1995 Bonds and the Outstanding Parity Bonds; provided the City obtains or provides a certificate or certificates, prepared by the City or at the City's option by a Consultant, showing (i) the Net System Revenues as shown by the books of the City for any 12 consecutive month period out of the 18 consecutive months ending immediately prior to the incurring of such other Parity Obligations shall have amounted to at least 1.20 times the Maximum Annual Debt Service on all Parity Obligations Outstanding during such period; and (ii) the estimated Net System Revenues for the next 12 months following the date of issuance of such other Parity Obligations will be at least equal to 1.20 times the Maximum Annual Debt Service for all Parity Obligations which will be Outstanding immediately after the issuance of the proposed Parity Obligations. See "SECURITY FOR THE SERIES 1995 BONDS."

### **Possible Transfer of Ownership of Metropolitan System**

Under the Installment Purchase Agreement, the City has retained the right to transfer ownership of the Metropolitan System to another governmental entity whose primary purpose is the provision of wastewater services provided its transferee assumes all obligations of the City under the Installment Purchase Agreement relating to the Metropolitan System and satisfies the terms and conditions contained in the Installment Purchase Agreement with respect to such transfer. Upon any transfer the City will no longer be responsible for such obligations. See "POSSIBLE TRANSFER OF OWNERSHIP OF METROPOLITAN SYSTEM."

### **Special Considerations For Bondholders**

See "SPECIAL CONSIDERATIONS FOR BONDHOLDERS" for a description of certain risk factors relating to the Series 1995 Bonds.

### **Continuing Disclosure and Additional Information**

See "CONTINUING DISCLOSURE" regarding the City's obligation to provide annual financial information and information regarding the occurrence of certain events. Copies of the Indenture, the Installment Purchase Agreement, the Continuing Disclosure Agreement, the City Charter, the Sewer Revenue Fund audited financial statements and additional information relating to the City and the Series 1995 Bonds may be obtained from the Office of the City Clerk, City Administration Building, 202 C Street, MS 2A, San Diego, California 92101.

**\$350,000,000**

**PUBLIC FACILITIES FINANCING AUTHORITY  
OF THE CITY OF SAN DIEGO  
SEWER REVENUE BONDS, SERIES 1995**

*(Payable Solely From Installment Payments  
Secured by Wastewater System Net Revenues)*

**INTRODUCTION**

This Official Statement, which includes the cover page and appendices hereto, is being furnished in connection with the issuance by the Public Facilities Financing Authority of the City of San Diego (the "Authority") of its \$350,000,000 aggregate principal amount of Sewer Revenue Bonds, Series 1995 (Payable Solely From Installment Payments Secured By Wastewater System Net Revenues) (the "Series 1995 Bonds"). The Series 1995 Bonds will be issued on a parity with the Authority's Sewer Revenue Bonds, Series 1993 (Payable Solely From Installment Payments Secured by Wastewater System Net Revenues) (the "Series 1993 Bonds" or sometimes referred to herein as the "Outstanding Parity Bonds"), issued in the original aggregate principal amount of \$250,000,000 of which \$242,785,000 are outstanding. The Master Installment Purchase Agreement, dated as of September 15, 1993, and the 1995-1 Supplement to the Master Installment Purchase Agreement, dated as of December 1, 1995, between the Authority and the City of San Diego (the "City") (the Master Installment Purchase Agreement together with the 1995-1 Supplement to the Master Installment Purchase Agreement and any other Supplements thereto, are collectively referred to as the "Installment Purchase Agreement"), provides for the sale of certain facilities to the City by the Authority in consideration of the City's payment of Installment Payments to the Authority in an amount equal to the principal and interest on the Series 1995 Bonds and the Outstanding Parity Bonds. The Indenture, dated as of September 15, 1993, between the Authority and State Street Bank and Trust Company of California, N.A., as Trustee (the "Original Indenture"), as supplemented by the First Supplemental Indenture, dated as of May 1, 1994, and the Second Supplemental Indenture, dated as of December 1, 1995, between the Authority and the Trustee (the First Supplemental Indenture, the Second Supplemental Indenture, together with the Original Indenture, are collectively referred to as the "Indenture"), provides for the execution, delivery and issuance of the Series 1995 Bonds. The Series 1995 Bonds are being issued pursuant to the provisions of the Joint Powers Act, comprising Article 1, Article 2 and Article 4 (commencing with Section 6500) of Chapter 5 of Division 7 of Title 1 of the Government Code of the State of California. Capitalized terms not otherwise defined herein shall have the meaning given to such terms in "APPENDIX D - DEFINITIONS OF CERTAIN TERMS."

The Series 1995 Bonds are special, limited obligations of the Authority payable from and secured by Installment Payments made by the City to the Authority from Net System Revenues pursuant to the Installment Purchase Agreement. Installment Payments are in an amount equal to the principal and interest due on the Series 1995 Bonds and the Outstanding Parity Bonds. System Revenues consist primarily of moneys derived by the City from the ownership and operation of the Wastewater System. Net System Revenues are System Revenues less Maintenance and Operation Costs of the Wastewater System. The City has pledged and assigned Net System Revenues pursuant to the Installment Purchase Agreement to the payment of the Installment Payments. Pursuant to the Indenture, the Authority has irrevocably pledged the Installment Payments to the payment of principal and interest on the Series 1995 Bonds and the Outstanding Parity Bonds. See "SECURITY FOR THE SERIES 1995 BONDS."

The Installment Purchase Agreement defines the Wastewater System to be any and all facilities, properties and improvements at any time owned, controlled or operated by the City as part of the Sewer Revenue Fund, including the Municipal System and the Metropolitan System. The Municipal System consists of the facilities, properties and improvements of the City for the collection and treatment of sewage from points of origination within the City and the conveyance of sewage to the Metropolitan System. The Metropolitan System consists of the facilities, properties and improvements, designated by the City in its sole discretion as part of the Metropolitan System, used for the treatment, discharge and disposal of sewage collected by the City through the Municipal System or by any of the Participating Agencies (defined herein).

The Authority has received a commitment from Financial Guaranty Insurance Company ("Financial Guaranty") to insure the Series 1995 Bonds; however, the Authority reserves the right to elect not to insure any or all of the Series 1995 Bonds depending on the results of economic analysis at the time of pricing the Series 1995 Bonds. See "SECURITY FOR THE SERIES 1995 BONDS - Bond Insurance" and "APPENDIX G - SPECIMEN MUNICIPAL BOND INSURANCE POLICY."

See "POSSIBLE TRANSFER OF OWNERSHIP OF METROPOLITAN SYSTEM" for information regarding the power of the City to transfer ownership of the Metropolitan System and to then be discharged from its obligations with respect to the Series 1995 Bonds and the Outstanding Parity Bonds.

The Installment Purchase Agreement authorizes the Authority to acquire certain components of the Project with the proceeds of the Series 1995 Bonds and to sell such components of the Project to the City in consideration of the City's payment of Installment Payments to the Authority. The Project consists of design and engineering costs, costs of land acquisition, construction and other initial costs relating to certain capital improvements to the Metropolitan System.

The obligation of the City to make Installment Payments does not constitute an obligation of the City for which the City is obligated to levy or pledge any form of taxation or for which the City has levied or pledged any form of taxation. Neither the pledge made by the Authority, nor the obligation of the City to make Installment Payments, creates a legal or equitable pledge, charge, lien or encumbrance upon any of the City's property, or upon its income, receipts or revenues other than Net System Revenues. The Authority has no taxing power.

The descriptions and summaries of various documents in this Official Statement are qualified in their entirety by reference to such documents. Copies of the Indenture, the Installment Purchase Agreement, the Continuing Disclosure Agreement, the City Charter, the Sewer Revenue Fund audited financial statements and additional information relevant to the City and the Series 1995 Bonds may be obtained from the Office of the City Clerk, City Administration Building, 202 C Street, MS 2A, San Diego, California 92101.

## DESCRIPTION OF THE SERIES 1995 BONDS

### *General Terms*

The Series 1995 Bonds will be issued in the aggregate principal amount, will bear interest at the rates per annum and will mature in the principal amounts in each year (subject to prior redemption), as set forth on the cover page hereof. The Series 1995 Bonds are issuable only in fully registered form and, when issued, will be registered in the name of Cede & Co., as registered owner and nominee of The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository for the Series 1995 Bonds. Purchasers will not receive certificates representing their interest in the Series 1995 Bonds purchased. See "Book-Entry-Only System" below.

The Series 1995 Bonds may be transferred on the registration books of the Trustee kept for that purpose at its principal corporate trust office. Neither the Authority nor the Trustee will be required to transfer or exchange the Series 1995 Bonds (i) for a period beginning with the close of business on the 15th day next preceding any interest payment date and ending on such interest payment date; (ii) for a period beginning on the day five Business Days before the date on which the Series 1995 Bonds are to be selected for redemption and ending on such date of selection; (iii) for a period beginning 15 days before the mailing of any notice of redemption and ending on the day of such mailing; or (iv) called for redemption in whole or in part.

The Series 1995 Bonds will be paid to the person in whose name such Bond is registered on the applicable record date, which is the 15th day preceding each interest payment date. Interest on the Series 1995 Bonds will be payable by check of the Trustee, mailed to the registered owners at the addresses shown on the registration books of the Trustee kept for that purpose at its principal corporate trust office as of the close of business on the applicable record date; provided, however, if the Series 1995 Bonds are in certificated form, interest shall be payable by wire transfer to registered owners who own Series 1995 Bonds in the principal amount of not less than \$1,000,000. The

principal and redemption price of all Series 1995 Bonds will be payable at the principal corporate trust office of the Trustee.

### **Series 1995 Bonds**

The Series 1995 Bonds will be dated December 1, 1995 and interest thereon will accrue from such date. Beneficial ownership of Series 1995 Bonds may be purchased in denominations of \$5,000 or any integral multiple thereof in book-entry form only. Interest on the Series 1995 Bonds is payable on May 15 and November 15 of each year, commencing May 15, 1996. The Series 1995 Bonds will mature on the dates and in the aggregate principal amounts, and will bear interest at the per annum rates, set forth on the cover page of this Official Statement.

**Optional Redemption.** The Series 1995 Bonds maturing on or before May 15, 2007, are not subject to redemption prior to maturity. If the City elects its option to prepay Installment Payments under the terms of the Installment Purchase Agreement, the Series 1995 Bonds maturing on May 15, 2008 through and including May 15, 2015 are subject to redemption prior to their stated maturities on or after May 15, 2005, in whole or in part on any date (if in part, in maturities selected by the Authority and by lot within any maturity), at the redemption prices set forth below (expressed as a percentage of the principal, or portion thereof, to be prepaid), plus accrued interest, to the date fixed for redemption:

<b>Redemption Period (Both dates inclusive)</b>	<b>Redemption Price</b>
May 15, 2005 through May 14, 2006	102%
May 15, 2006 through May 14, 2007	101
May 15, 2007 and thereafter	100

If the City elects its option to prepay Installment Payments under the terms of the Installment Purchase Agreement, the Series 1995 Bonds maturing on May 15, 2020 and May 15, 2025 are subject to redemption prior to their stated maturities on or after May 15, 2005, in whole or in part on any date (if in part, in maturities selected by the Authority and by lot within any maturity), at the redemption prices set forth below (expressed as a percentage of the principal, or portion thereof, to be prepaid), plus accrued interest, to the date fixed for redemption:

<b>Redemption Period (Both dates inclusive)</b>	<b>Redemption Price</b>
May 15, 2005 through May 14, 2006	101%
May 15, 2006 through May 14, 2007	100.5
May 15, 2007 and thereafter	100

**Mandatory Sinking Fund Redemption.** The Series 1995 Bonds maturing on May 15, 2020 and May 15, 2025 (collectively the "Term Bonds") are subject to mandatory sinking fund redemption at a redemption price equal to the principal amount thereof without premium plus accrued interest to the redemption date.

The Series 1995 Bonds maturing on May 15, 2020 shall be redeemed on May 15 in the years and in the principal amounts set forth in the table below:

<b><u>Year</u></b>	<b><u>Principal Amount</u></b>
2016	\$14,480,000
2017	15,200,000
2018	15,960,000
2019	16,760,000
2020*	17,600,000

\*Maturity



The Series 1995 Bonds maturing on May 15, 2025 shall be redeemed on May 15 in the years and in the principal amounts set forth in the table below:

<u>Year</u>	<u>Principal Amount</u>
2021	\$18,480,000
2022	19,400,000
2023	20,370,000
2024	21,390,000
2025*	22,460,000

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\*Maturity

***Credit Against Mandatory Sinking Fund Requirement.*** At the option of the Authority, it may credit against any mandatory sinking fund requirement of the Term Bonds or portions thereof which are of the same maturity as the Term Bonds subject to redemption and which, prior to said date, have been purchased, with funds other than moneys in a Sinking Account, at public or private sale or redeemed and canceled by the Authority and not theretofore applied as a credit against any mandatory sinking fund requirement. The Authority and the City may also elect to have moneys in the Sinking Account applied to the purchase of the Term Bonds which in turn shall be credited against any mandatory sinking fund redemption requirement all as provided for in the Indenture. If, during the twelve-month period immediately preceding said mandatory sinking account payment date, the Trustee has purchased Term Bonds of such maturity with moneys in such Sinking Account, such Bonds so purchased shall be applied, to the extent of the full principal amount thereof, to reduce said mandatory sinking account payment.

***Notice of Redemption.*** Notice of redemption shall be given by the Trustee not less than 30 days nor more than 60 days prior to the redemption date to (i) the respective Owners of the Series 1995 Bonds designated for redemption at their addresses appearing on the registration books of the Trustee by first class mail, and (ii) the Securities Depositories and the Information Services by certified or registered mail or overnight delivery. Each notice of redemption shall state the date of such redemption, the redemption price, if any, the name and appropriate address of the Trustee, the CUSIP number, if any, of the maturity or maturities, and, if less than all of any such maturity is to be redeemed, the distinctive certificate numbers of the Series 1995 Bonds of such maturity to be redeemed and, in the case of Series 1995 Bonds to be redeemed in part only, the respective portions of the principal amount thereof to be redeemed. Each such notice shall also state that on said date there will become due and payable on each of said Series 1995 Bonds thereof and in the case of a Series 1995 Bond to be redeemed in part only, the specified portion of the principal amount thereof to be redeemed, together with interest accrued thereon to the redemption date, and that from and after such redemption date interest thereon shall cease to accrue, and shall require that such Series 1995 Bonds be then surrendered at the address of the Trustee specified in the redemption notice.

#### ***Book-Entry-Only System***

The information contained in the following paragraphs of this subsection "Book-Entry-Only System" has been extracted from a schedule prepared by DTC entitled "SAMPLE OFFICIAL STATEMENT LANGUAGE DESCRIBING BOOK-ENTRY-ONLY ISSUANCE." The Authority and the City make no representation as to the completeness or the accuracy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof.

1. DTC will act as securities depository for the Series 1995 Bonds. The Series 1995 Bonds will be issued as fully registered securities in the names of Cede & Co. (DTC's partnership nominee). One fully registered Series 1995 Bonds certificate will be issued for each maturity of the Series 1995 Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC. If, however, the aggregate principal amount of any maturity exceeds \$150 million, one certificate will be issued with respect to each \$150 million of principal amount and an additional certificate will be issued with respect to any remaining principal amount of such issue.

2. DTC is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds securities that its participants ("Participants") deposit with DTC. DTC also facilitates the settlement among Participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry changes in Participants' accounts, thereby eliminating the need for physical movement of securities certificates. Direct Participants include securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is owned by a number of its Direct Participants and by the New York Stock Exchange, Inc., the American Stock Exchange, Inc., and the National Association of Securities Dealers, Inc. Access to the DTC system is also available to others such as securities brokers and dealers, banks, and trust companies that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). The rules applicable to DTC and its Participants are on file with the Securities and Exchange Commission.

3. Purchases of Series 1995 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 1995 Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 1995 Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase, but Beneficial Owners are expected to receive written confirmation providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in Series 1995 Bonds are to be accomplished by entries made on the books of Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interest in Series 1995 Bonds, except in the event that use of the book-entry system for the Series 1995 Bonds is discontinued.

4. To facilitate subsequent transfers, all Series 1995 Bonds deposited by Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. The deposit of Series 1995 Bonds with DTC and their registration in name of Cede & Co., effects no change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 1995 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 1995 Bonds are credited, which may or may not be the Beneficial Owners. The Participants will remain responsible for keeping account of their holdings on behalf of their customers.

5. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

6. Redemption notices shall be sent to Cede & Co. If less than all of the Series 1995 Bonds within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

7. Neither DTC nor Cede & Co. will consent or vote with respect to the Series 1995 Bonds. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series 1995 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

8. Principal and interest on the Series 1995 Bonds will be made to DTC. DTC's practice is to credit Direct Participants' accounts on payable date in accordance with their respective holdings shown on DTC's records unless DTC has reason to believe that it will not receive payment on payable date. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as in the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee, or the Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to DTC is the responsibility of the

Authority or the Trustee, disbursement of such payments to Direct Participants shall be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners shall be the responsibility of Direct and Indirect Participants.

9. DTC may discontinue providing its services as securities depository with respect to the Series 1995 Bonds at any time by giving reasonable notice to the Authority or the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, Series 1995 Bonds will be printed and delivered.

10. The Authority may decide to discontinue use of the system book-entry transfers through DTC (or a successor securities depository). In that event, Series 1995 Bond certificates will be printed and delivered.

11. The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Authority believes to be reliable, but the Authority takes no responsibility for the accuracy thereof.

NONE OF THE AUTHORITY, THE CITY OR THE UNDERWRITERS WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO PARTICIPANTS, TO INDIRECT PARTICIPANTS OR TO ANY BENEFICIAL OWNER WITH RESPECT TO (I) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC, ANY PARTICIPANT, OR ANY INDIRECT PARTICIPANT; (II) THE PAYMENT BY DTC OR ANY PARTICIPANT OR INDIRECT PARTICIPANT OF ANY AMOUNT WITH RESPECT TO THE PRINCIPAL OF, OR PREMIUM, IF ANY, OR INTEREST ON, THE SERIES 1995 BONDS; (III) ANY NOTICE WHICH IS PERMITTED OR REQUIRED TO BE GIVEN TO BONDOWNERS; (IV) ANY CONSENT GIVEN BY DTC OR OTHER ACTION TAKEN BY DTC AS BONDOWNER; OR (V) THE SELECTION BY DTC OR ANY PARTICIPANT OR INDIRECT PARTICIPANT OF ANY BENEFICIAL OWNERS TO RECEIVE PAYMENT IN THE EVENT OF A PARTIAL REDEMPTION OF THE SERIES 1995 BONDS.

#### *Purpose of Financing*

The proceeds of the Series 1995 Bonds will be applied to finance a portion of the costs of certain capital improvements relating to the Metropolitan System. See "WASTEWATER SYSTEM CAPITAL IMPROVEMENT PROGRAM." These include costs of design, engineering, legal and administrative services, acquisition of rights-of-way, land acquisition, construction and equipment. The remaining proceeds of the Series 1995 Bonds are to be applied to fund a debt service reserve fund and to pay costs of issuance.

#### *Application of Series 1995 Bond Proceeds*

The proceeds of the Series 1995 Bonds (excluding accrued interest which will be deposited in the Interest Account in the Payment Fund) are to be applied as follows:

Principal amount of the Series 1995 Bonds	\$350,000,000.00
Less Original Issue Discount	<u>(6,160,038.10)</u>
Total Amount Available	<u>\$343,839,961.90</u>
Deposit to Acquisition Fund <sup>(1)</sup>	\$318,113,428.90
Costs of Issuance <sup>(2)</sup>	1,082,403.69
Underwriters' Discount	2,264,522.97
Deposit to Reserve Fund <sup>(3)</sup>	<u>22,379,606.34</u>
Total Amount Applied	<u>\$343,839,961.90</u>

(1) To be held by the City Treasurer and applied to pay Acquisition Costs.

(2) Includes bond insurance premium of \$884,578.69.

(3) This deposit, together with \$17,525,381.16 currently on deposit in the Reserve Fund held by the Trustee with respect to the Outstanding Parity Bonds, comprise an amount equal to the Reserve Requirement.

## Debt Service Requirements

The following table shows the total debt service requirements from Net System Revenues with respect to the Series 1995 Bonds and the Outstanding Parity Bonds.

**Table 1**  
**TOTAL DEBT SERVICE REQUIREMENTS**

<b>Year Ending June 30</b>	<b><u>Series 1995 Bonds</u></b>		<b><u>Outstanding Parity Bonds</u></b>		<b>Total Debt Service</b>
	<b><u>Principal</u></b>	<b><u>Interest</u></b>	<b><u>Principal</u></b>	<b><u>Interest</u></b>	
1996		\$ 7,945,913.32	\$4,500,000	\$5,908,980.63	\$18,354,893.95
1997		17,442,248.76	4,660,000	11,660,461.25	33,762,710.01
1998	\$ 6,140,000	17,442,248.76	4,820,000	11,497,361.25	39,899,610.01
1999	6,380,000	17,202,788.76	5,000,000	11,316,611.25	39,899,400.01
2000	6,635,000	16,947,588.76	5,205,000	11,116,611.25	39,904,200.01
2001	6,910,000	16,675,553.76	5,415,000	10,903,206.25	39,903,760.01
2002	7,200,000	16,381,878.76	5,645,000	10,675,776.25	39,902,655.01
2003	7,510,000	16,072,278.76	5,885,000	10,433,041.25	39,900,320.01
2004	7,840,000	15,743,716.26	6,145,000	10,174,101.25	39,902,817.51
2005	8,195,000	15,390,916.26	6,420,000	9,897,576.25	39,903,492.51
2006	8,685,000	14,899,216.26	6,720,000	9,600,651.25	39,904,867.51
2007	9,205,000	14,378,116.26	7,040,000	9,281,451.25	39,904,567.51
2008	9,760,000	13,825,816.26	7,375,000	8,943,531.25	39,904,347.51
2009	10,235,000	13,350,016.26	7,735,000	8,584,000.00	39,904,016.26
2010	10,730,000	12,851,060.00	8,115,000	8,204,985.00	39,901,045.00
2011	11,270,000	12,314,560.00	8,510,000	7,807,350.00	39,901,910.00
2012	11,850,000	11,734,155.00	8,935,000	7,381,850.00	39,901,005.00
2013	12,460,000	11,123,880.00	9,385,000	6,935,100.00	39,903,980.00
2014	13,105,000	10,475,960.00	9,855,000	6,465,850.00	39,901,810.00
2015	13,790,000	9,794,500.00	10,370,000	5,948,462.50	39,902,962.50
2016	14,480,000	9,105,000.00	10,915,000	5,404,037.50	39,904,037.50
2017	15,200,000	8,381,000.00	11,490,000	4,831,000.00	39,902,000.00
2018	15,960,000	7,621,000.00	12,090,000	4,227,775.00	39,898,775.00
2019	16,760,000	6,823,000.00	12,725,000	3,593,050.00	39,901,050.00
2020	17,600,000	5,985,000.00	13,395,000	2,924,987.50	39,904,987.50
2021	18,480,000	5,105,000.00	14,095,000	2,221,750.00	39,901,750.00
2022	19,400,000	4,181,000.00	14,800,000	1,517,000.00	39,898,000.00
2023	20,370,000	3,211,000.00	15,540,000	777,000.00	39,898,000.00
2024	21,390,000	2,192,500.00	--	--	23,582,500.00
2025	22,460,000	1,123,000.00	--	--	23,583,000.00

## SECURITY FOR THE SERIES 1995 BONDS

### *Source of Payment*

The Series 1995 Bonds are payable solely from Installment Payments made by the City from Net System Revenues pursuant to the Installment Purchase Agreement and will be issued on a parity with the Outstanding Parity Bonds. See "SECURITY FOR THE SERIES 1995 BONDS - Outstanding Parity Bonds." All Parity Obligations, including the Installment Payments pledged to the payment of the Series 1995 Bonds and the Outstanding Parity Bonds, shall be secured by a lien on and pledge of Net System Revenues, and within such lien priority, Parity Obligations shall be of equal rank without preference, priority or distinction of any Parity Obligations over any other Parity Obligations. Such lien and pledge shall constitute a first lien on Net System Revenues; provided, however, that out of Net System Revenues there may be apportioned such sums for such purposes as are expressly permitted by the Installment Purchase Agreement.

### *The Sewer Revenue Fund*

The City accounts for its wastewater operations through an enterprise fund known as the Sewer Revenue Fund. The Sewer Revenue Fund was established pursuant to the San Diego Municipal Code and is held separate and apart from other funds of the City.

All System Revenues are deposited in the Sewer Revenue Fund. All moneys in the Sewer Revenue Fund are held in trust separate and apart from any other funds of the City and shall be used to pay (i) all Maintenance and Operation Costs of the Wastewater System and (ii) all Parity Obligations, including Installment Payments equal to the principal and interest on the Series 1995 Bonds and the Outstanding Parity Bonds. After such payments have been made, any remaining System Revenues shall be used to make up any deficiency in the Reserve Fund for Parity Obligations and, subject to certain conditions, then may be used to pay for capital expenditures for the Wastewater System or any other Wastewater System purposes, including the payment of Subordinated Obligations, if any.

### *Net System Revenues*

Net System Revenues are System Revenues less Maintenance and Operation Costs of the Wastewater System. System Revenues are defined in the Installment Purchase Agreement to include all income, rents, rates, fees, charges and other moneys derived from the ownership or operation of the Wastewater System. Notwithstanding the foregoing, there shall be deducted from System Revenues any amounts transferred into the Rate Stabilization Fund, and there shall be added to System Revenues any amounts transferred out of such Rate Stabilization Fund to pay Maintenance and Operation Costs of the Wastewater System. Under the Installment Purchase Agreement, the City has retained the right to transfer ownership of the Metropolitan System. Upon any such transfer of the Metropolitan System permitted by the Installment Purchase Agreement, System Revenues shall be deemed to consist of Municipal System Revenues with respect to the City and Metropolitan System Revenues with respect to the transferee. For a more detailed description of System Revenues, Metropolitan System Revenues and Municipal System Revenues, see "APPENDIX D - DEFINITIONS OF CERTAIN TERMS."

Maintenance and Operations Costs of the Wastewater System are defined in the Installment Purchase Agreement to include, among other things (i) a Qualified Take or Pay Obligation; (ii) fees and expenses of a Credit Provider (exclusive of payment of Credit Provider Reimbursement Obligations); and (iii) the reasonable and necessary costs spent or incurred by the City for maintaining and operating the Wastewater System, calculated in accordance with generally accepted accounting principles, but excluding in all cases (a) depreciation, replacement and obsolescence charges or reserves therefor, (b) amortization of intangibles or other bookkeeping entries of a similar nature, (c) costs of capital additions, replacements, betterments, extensions or improvements to the Wastewater System, which under generally accepted accounting principles are chargeable to a capital account or to a reserve for depreciation, (d) charges for the payment of principal and interest on any general obligation bond theretofore or hereafter issued for Wastewater System purposes, and (e) charges for the payment of principal and interest on any debt service on account of any obligation on a parity with or subordinate to the Installment Payments. Qualified Take or Pay Obligation means the obligation of the City to make use of any facility, property or services, or some portion of the capacity thereof, or to pay therefor from System Revenues, or both, whether

or not such facilities, properties or services are ever made available to the City for use, and there is provided to the City a certificate of an Independent Engineer to the effect that the incurrence of such obligation will not adversely affect the ability of the City to comply with the rate covenant contained in the Installment Purchase Agreement. Under the Installment Purchase Agreement, the City has retained the right to transfer ownership of the Metropolitan System. For a more detailed description of this potential transfer of ownership, see "POSSIBLE TRANSFER OF OWNERSHIP OF METROPOLITAN SYSTEM." Upon any such transfer of the Metropolitan System permitted by the Installment Purchase Agreement, Maintenance and Operations Costs of the Wastewater System shall be deemed to be Maintenance and Operations Costs of the Municipal System with respect to the City and Maintenance and Operations Costs of the Metropolitan System with respect to the transferee. For a more detailed description of Maintenance and Operations Costs of the Wastewater System, the Metropolitan System and the Municipal System, respectively, see "APPENDIX D - DEFINITIONS OF CERTAIN TERMS."

#### ***Obligation of City Under Installment Purchase Agreement***

Pursuant to the Installment Purchase Agreement, the City commits, absolutely and unconditionally, to make Installment Payments to the Authority solely from Net System Revenues until such time as the Purchase Price for the Components of the Project financed has been paid in full (or provision for the payment thereof has been made pursuant to the Indenture). The City will not discontinue or suspend any Installment Payments whether or not the Project or any part thereof is operating or operable or has been completed, or its use is suspended, interfered with, reduced, curtailed or terminated in whole or in part, and such Installment Payments shall not be subject to reduction whether by offset or otherwise and shall not be conditioned upon the performance or non-performance by any party of any agreement for any cause whatsoever.

#### ***Rate Covenant***

The City has covenanted in the Installment Purchase Agreement to fix, prescribe and collect rates and charges for wastewater service which during each fiscal year will be at least sufficient (i) to pay all Obligations (other than Parity Obligations) and (ii) to yield Net System Revenues equal to 120% of the Debt Service for such fiscal year. The City may make adjustments from time to time in such rates and charges including reclassification of users as it deems necessary, but shall not reduce the rates and charges then in effect unless the Net System Revenues from such reduced rates and charges will at all times be sufficient to meet the requirements of the Installment Purchase Agreement.

The City is establishing, pursuant to the issuance of the Series 1995 Bonds, as a fund within the Sewer Revenue Fund, a Rate Stabilization Fund. From time to time the City may deposit into the Rate Stabilization Fund, from current System Revenues, such amounts as the City shall determine and the amount of available current System Revenues shall be reduced by the amount so transferred. From time to time the City may transfer amounts on deposit in the Rate Stabilization Fund to the Sewer Revenue Fund solely to pay Maintenance and Operation Costs, and any amounts so transferred shall be deemed System Revenues when so transferred. All interest or other earnings upon amounts in the Rate Stabilization Fund may be withdrawn therefrom and accounted for as System Revenues. See Table 14 under the caption "FINANCIAL PROJECTIONS" for currently anticipated deposits into and withdrawals from the Rate Stabilization Fund incident to the currently contemplated Wastewater System Capital Improvement Program.

#### ***Pledge Under the Indenture***

Pursuant to the Indenture, the Authority has irrevocably pledged all Revenues and amounts on deposit in the funds and accounts established under the Indenture (other than amounts on deposit in the Rebate Fund) to the payments of principal and interest on the Series 1995 Bonds and the Outstanding Parity Bonds. The Indenture defines the term "Revenues" to mean all Installment Payments paid by the City pursuant to the Installment Purchase Agreement, including interest or profits from the investment of money in any account or fund (other than the Rebate Fund). In order to secure the pledge of the Revenues, the Authority has transferred, conveyed and assigned to the Trustee, for the benefit of the Owners, all of the Authority's rights under the Installment Purchase Agreement (excluding its right to indemnification thereunder), including the right to receive Installment Payments from the City, the right to receive any proceeds of insurance maintained thereunder or any condemnation award rendered with

respect to the Project, and the right to exercise any remedies provided therein in the event of a default by the City thereunder.

The Trustee will establish and maintain special trust funds to be held by the Trustee called the Payment Fund and the Reserve Fund. Within the Payment Fund, the Trustee will establish and maintain the Interest Account, the Principal Account, the Sinking Account and the Redemption Account. Under the Installment Purchase Agreement, the City will pay the Installment Payments out of the Sewer Revenue Fund to the Trustee for deposit into the Payment Fund so that the principal and interest due on the Series 1995 Bonds and the Outstanding Parity Bonds shall be paid no later than the last business day on which such payment is due. Subject to the provisions of the Indenture, all money in the Payment Fund will be deposited by the Trustee in the following respective special accounts within the Payment Fund in the following order of priority: (i) Interest Account, (ii) Principal Account, and (iii) Redemption Account.

### ***Bond Insurance***

The following information has been furnished by Financial Guaranty for use in this Official Statement. Reference is made to Appendix G for a specimen of Financial Guaranty's policy.

Concurrently with the issuance of the Series 1995 Bonds, Financial Guaranty Insurance Company, doing business in California as FGIC Insurance Company ("Financial Guaranty") will issue its Municipal Bond New Issue Insurance Policy for the Series 1995 Bonds (the "Policy"). The Policy unconditionally guarantees the payment of that portion of the principal of and interest on the Series 1995 Bonds which as become due for payment, but shall be unpaid by reason of nonpayment by the Authority. Financial Guaranty will make such payments to State Street Bank and Trust Company, N.A., or its successor as its agent (the "Fiscal Agent"), on the later of the date on which such principal and interest is due or on the business day next following the day on which Financial Guaranty shall have received telephonic or telegraphic notice, subsequently confirmed in writing, or written notice by registered or certified mail, from an owner of Series 1995 Bonds or the Paying Agent of the nonpayment of such amount by the Authority. The Fiscal Agent will disburse such amount due on any Series 1995 Bond to its owner upon receipt by the Fiscal Agent of evidence satisfactory to the Fiscal Agent of the owner's right to receive payment of the principal and interest due for payment and evidence, including any appropriate instruments of assignment, that all of such owner's rights to payment of such principal and interest shall be vested in Financial Guaranty. The term "nonpayment" in respect of a Series 1995 Bond includes any payment of principal or interest made to an owner of a Series 1995 Bond which has been recovered from such owner pursuant to the United States Bankruptcy Code by a trustee in bankruptcy in accordance with a final, nonappealable order of a court having competent jurisdiction.

The Policy is non-cancellable and the premium will be fully paid at the time of delivery of the Series 1995 Bonds. The Policy covers failure to pay principal of the Series 1995 Bonds on their respective stated maturity dates, or dates on which the same shall have been duly called for mandatory sinking fund redemption, and not on any other date on which the Series 1995 Bonds may have been otherwise called for redemption, accelerated or advanced in maturity, and covers the failure to pay an installment of interest on the stated date for its payment.

Generally, in connection with its insurance of an issue of municipal securities, Financial Guaranty requires, among other things, (i) that it be granted the power to exercise any rights, if any, granted to the holders of such securities upon the occurrence of an event of default, without the consent of such holders, and that such holders may not exercise such rights without Financial Guaranty's consent, in each case so long as Financial Guaranty has not failed to comply with its payment obligations under its insurance policy; and (ii) that any amendment or supplement to or other modification of the principal legal documents be subject to Financial Guaranty's consent. The specific rights, if any, granted to Financial Guaranty in connection with its insurance of the Series 1995 Bonds are set forth in the description of the principal legal documents appearing elsewhere in this Official Statement. Reference should be made as well to such description for a discussion of the circumstances, if any, under which the Authority is required to provide additional or substitute credit enhancement, and related matters.

This Official Statement contains a section regarding the ratings assigned to the Series 1995 Bonds and references should be made to such section for a discussion of such ratings and the basis for their assignment to the

Series 1995 Bonds and for a discussion of the ratings, if any, assigned to the Authority's outstanding parity debt that is not secured by credit enhancement.

The Policy is not covered by the Property/Casualty Insurance Security Fund specified in Article 76 of the New York Insurance law.

Financial Guaranty is a wholly-owned subsidiary of FGIC Corporation (the "Corporation"), a Delaware holding company. The Corporation is a subsidiary of General Electric Capital Corporation ("GE Capital"). Neither the Corporation nor GE Capital is obligated to pay the debts of or the claims against Financial Guaranty. Financial Guaranty is a monoline financial guaranty insurer domiciled in the State of New York and subject to regulation by the State of New York Insurance Department. As of June 30, 1995, the total capital and surplus of Financial Guaranty was approximately \$978,500,000. Financial Guaranty prepares financial statements on the basis of both statutory accounting principles and generally accepted accounting principles. Copies of such financial statements may be obtained by writing to Financial Guaranty at 115 Broadway, New York, New York 10006, Attention: Communications Department (telephone number: (212) 312-3000) or to the New York State Insurance Department at 160 West Broadway, 18th Floor, New York, New York 10013, Attention: Financial Condition Property/Casualty Bureau (telephone number: (212) 602-0389).

### *Reserve Fund*

A portion of the proceeds of the Series 1995 Bonds will be deposited in the Reserve Fund to fund the Reserve Requirement which is defined to be, as of any date of calculation, the least of (i) 10% of the proceeds of the Series 1995 Bonds and the Outstanding Parity Bonds, (ii) Maximum Annual Debt Service on the Series 1995 Bonds and the Outstanding Parity Bonds for the then current or any future fiscal year, or (iii) 125% of average Annual Debt Service on the Series 1995 Bonds and the Outstanding Parity Bonds.

At the option of the City, amounts required to be held in the Reserve Fund may be withdrawn, in whole or in part, upon the deposit of a Credit Facility with the Trustee, in a stated amount equal to the amounts so withdrawn, provided, that prior to the deposit of such Credit Facility, each of the rating agencies then rating the Series 1995 Bonds shall be notified of such proposed withdrawal and the deposit of such Credit Facility shall not result in a withdrawal or downgrading of any rating of the Series 1995 Bonds and the Outstanding Parity Bonds then in effect by each of the rating agencies then rating such Bonds. Any such withdrawal shall be transferred, at the election of the City, to the Acquisition Fund, to the Principal Account of the Payment Fund, to the Redemption Account of the Payment Fund or to a special account to be established for the payment of any fees in connection with obtaining such Credit Facility.

### *Outstanding Parity Bonds*

The City has incurred Parity Obligations in connection with the Series 1993 Bonds issued by the Authority on October 12, 1993 for the purpose of financing a portion of the costs of certain improvements relating to the Metropolitan System. The Series 1993 Bonds were issued in the original aggregate principal amount of \$250,000,000, \$242,785,000 of which is currently outstanding.

### *Parity Obligations*

The City may not create any Obligations the payments of which are senior or prior in right to the payment by the City of Parity Obligations. The City may at any time issue or create Parity Obligations, provided the City obtains or provides a certificate or certificates, prepared by the City or at the City's option by a Consultant, showing that:

- (i) the Net System Revenues as shown by the books of the City for any 12 consecutive month period out of the 18 consecutive months ending immediately prior to the incurring of such other Parity Obligations shall have amounted to at least 1.20 times the Maximum Annual Debt Service on all Parity Obligations Outstanding during such period; and



(ii) the estimated Net System Revenues for the next 12 months following the date of issuance of such other Parity Obligations will be at least equal to 1.20 times the Maximum Annual Debt Service for all Parity Obligations which will be Outstanding immediately after the issuance of the proposed Parity Obligations.

For purposes of the computations to be made as described in clause (ii) above, the determination of the Net System Revenues may take into account any increases in rates and charges which relate to the Wastewater System and shall take into account any reduction in such rates and charges, which will, for purposes of the test described in clause (ii), be effective during the fiscal year ending within the 12-month period for which such estimate is made; and may take into account an allowance for any estimated increase in such Net System Revenues from any revenue producing additions or improvements to or extensions of the Wastewater System, to be made with the proceeds of such additional indebtedness or with the proceeds of Parity Obligations previously issued, all in an amount equal to the estimated additional average annual Net System Revenues to be derived from such additions, improvements and extensions for the first 36-month period in which each addition, improvement or extension is respectively to be in operation, all as shown by such certificate of the City or a Consultant, as applicable; and, for the period contemplated by clause (ii), Maintenance and Operation Costs of the Wastewater System shall be deemed to be equal to such costs for the 12 consecutive months immediately prior to incurring such other Parity Obligations, but adjusted if deemed necessary, by the City or a Consultant, as applicable, for any increased Maintenance and Operations Costs of the Wastewater System which are, in the judgment of the City or a Consultant, as applicable, essential to maintaining and operating the Wastewater System and which will occur during the fiscal year ending within the period contemplated by clause (ii). The City has met the Parity Obligations test described above incident to issuance of the Series 1995 Bonds.

The certificate or certificates with respect to clause (ii) above shall not be required if the Parity Obligations being issued are for the purpose of refunding (a) then Outstanding Parity Obligations if at the time of the issuance of such Parity Obligations a certificate of an Authorized City Representative shall be delivered showing that Debt Service in each fiscal year on all Parity Obligations Outstanding after the issuance of the refunding Parity Obligations will not exceed the Debt Service in each corresponding fiscal year on all Parity Obligations Outstanding prior to the issuance of such Parity Obligations; or (b) then Outstanding Balloon Indebtedness, Tender Indebtedness or Variable Rate Indebtedness, but only to the extent that the principal amount of the refunding Parity Obligations (without regard to amounts thereof which after issuance are to be accreted) does not exceed the principal amount of the Balloon Indebtedness, Tender Indebtedness or Variable Rate Indebtedness has been put, tendered to or otherwise purchased by a standby purchase or other liquidity facility relating to such Indebtedness. For additional information relating to the terms and conditions for the issuance of the Parity Obligations, see "APPENDIX D - DEFINITIONS OF CERTAIN TERMS" and "APPENDIX E - SUMMARY OF PRINCIPAL LEGAL DOCUMENTS."

### ***Subordinated Obligations***

The City may issue and incur Subordinated Obligations which are payable from Net System Revenues on a basis subordinate to the payment by the City of the Installment Payments so long as no Event of Default has occurred and is continuing and no event of default or Termination Event under any Qualified Swap Agreement has occurred and is continuing.

## **SPECIAL CONSIDERATIONS FOR BONDHOLDERS**

Incident to the purchase of the Series 1995 Bonds, prospective investors should give special consideration to the following:

1. See "ACTIONS UNDER THE CLEAN WATER ACT - Litigation and Proposed Consent Decree" for information regarding litigation pending against the City for alleged violations of the Clean Water Act. See also discussion under the subcaption "Relief from Secondary Treatment Requirements" for information regarding an administrative waiver from secondary sewage treatment requirements which the City has received and pending legislation.

2. See "WASTEWATER SYSTEM - The Participating Agencies and Sewage Disposal Agreements and Other Agreements" for information regarding litigation in which the City is engaged with a number of Participating Agencies for which it provides sewage discharge services.

3. See "WASTEWATER SYSTEM FINANCIAL OPERATIONS - Management's Discussion and Analysis - Operating Expenses" for information regarding certain charges paid from the Sewer Revenue Fund to the City's General Fund.

4. See "WASTEWATER SYSTEM - Metropolitan System Facilities" for information regarding the construction of the Northern Sludge Processing Facility at the Miramar Naval Air Station to replace the sludge processing facilities currently located at Fiesta Island.

## **THE AUTHORITY**

The Authority was established pursuant to a Joint Exercise of Powers Agreement, dated May 14, 1991, by and between the City and the Redevelopment Agency of the City. The Authority is intended as a financing vehicle for City facilities and projects.

## **WASTEWATER SYSTEM**

### ***The Wastewater System***

The Wastewater System consists of the Municipal System, which is a municipal sewage collection system for the City's residents, and the Metropolitan System, which is a regional sewage collection, treatment and disposal system initiated in 1958 (and operational since 1963) to serve the City and various other public agencies including cities situated within common drainage areas. The Metropolitan System was designed to provide sufficient capacity to accommodate a regional population of 2,600,000. The City, as operator of the Metropolitan System, is the holder of the National Pollutant Discharge Elimination System ("NPDES") permit and is responsible for maintaining the discharge requirements required under Federal law. The Metropolitan System, as presently designed, provides advanced primary treatment of sewage. See "ACTIONS UNDER THE CLEAN WATER ACT - Relief From Secondary Treatment Standards" for information regarding pending litigation relating to the level of treatment currently provided by the Metropolitan System, the administrative waiver from secondary treatment standards of the Clean Water Act which the City has received and pending legislation which would establish wastewater treated to an advanced primary level with certain chemically enhanced treatment and offshore discharge standards as being the equivalent of the secondary treatment standards of the Clean Water Act.

The map which follows the Table of Contents of this Official Statement shows the sewer service area boundaries of the Wastewater System which covers approximately 450 square miles, including most of the City.

### ***Wastewater System Management***

The Metropolitan System is managed by the Metropolitan Wastewater Department (the "MWWD"). For the fiscal year ending June 30, 1996, the MWWD has a \$464 million budget and expects to employ approximately 630 persons. The Municipal System is managed by the Water Utilities Department (the "WUD") which also manages the City's water system. For the fiscal year ending June 30, 1996, the WUD has a budget of \$295 million and expects to employ approximately 1,063 employees. Both the MWWD and the WUD have employees deployed in both dedicated and combined work forces for maintenance and operation of the Wastewater System. The combined budgets for the fiscal year ending June 30, 1996 for both the MWWD and the WUD allocate approximately 57% of both departments' total work force to the maintenance, operations and planning of the Municipal System and Metropolitan System.

The MWWD and the WUD operate the Wastewater System with funds derived primarily from service charges which are deposited in the Sewer Revenue Fund, a fund shared by both the MWWD and the WUD.

Funds in the Sewer Revenue Fund are used for the operation, maintenance, and capital improvement of the Municipal System and Metropolitan System.

### ***Municipal System Facilities***

The Municipal System is comprised of 2,498 miles of trunk and collector mains, 84 sewer pump stations (3 of which are operated and maintained by the MWWDD) and 18 storm water pump stations serving in excess of 240,000 customer accounts. On average, these accounts (of which 82 % are single-family dwellings, 12 % are multi-family dwellings, and the remaining 6 % are commercial and industrial customers) generate 128 million gallons per day ("mgd") of wastewater which is conveyed by the Municipal System to the Metropolitan System for treatment and disposal. The Wastewater System Capital Improvement Program described under that caption contemplates appropriations of \$451.03 million for Municipal System facilities during the eight fiscal years ending June 30, 2003. Currently, it is not contemplated that proceeds of the Series 1995 Bonds will be used to finance improvements to the Municipal System. However, the proceeds of subsequent bond issues payable from Net System Revenues may be used to finance improvements to the Municipal System.

### ***Metropolitan System Facilities***

The current Metropolitan System infrastructure, with the exception of the South Metro interceptor, is located within the jurisdictional boundaries of the City and is concentrated along a kidney shaped corridor running from Mission Bay to the north, and along the perimeter of the San Diego Bay to the south. The map on the inside front cover shows the geographic concentration of the Metropolitan System's infrastructure and identifies the major trunk lines which service the Participating Agencies.

The Metropolitan System's infrastructure consists of one main wastewater treatment plant, an ocean outfall, a sludge drying facility, two pump stations and force mains and gravity flow interceptors. A brief description of the current facilities and their primary functions is provided below.

***Point Loma Wastewater Treatment Plant.*** The Point Loma Wastewater Treatment Plant (the "Point Loma Plant") began operation in 1963. The site is part of the Fort Rosecrans military reservation and was acquired by the City from the U.S. Department of the Interior, Bureau of Land Management. From 1963 to 1985, the Point Loma Plant functioned as a primary treatment plant; gravity separation was used to reduce suspended solids levels by 60% prior to ocean discharge. In 1985, the Point Loma Plant was equipped to use chemical coagulants to achieve 75 % suspended solids removal. In 1995, the Point Loma Plant achieved suspended solids removal rates in the 83-85 % range through the use of enhanced chemical treatment.

The wastewater treatment process currently employed at the Point Loma Plant consists of advanced primary treatment and includes mechanical screening by which raw wastewater flows into the Point Loma Plant through five 15 millimeter mesh, mechanically self-cleaning traveling screens, the addition of chemical coagulants to enhance settling to achieve at least 80% removal of suspended solids, sedimentation, and sludge digestion. A digester gas utilization facility and hydroelectric generation facility are also a part of the Point Loma Plant. Dewatering and disposal of sludge are provided off site. See "ACTIONS UNDER THE CLEAN WATER ACT - Litigation and Proposed Consent Decree" and "- Relief From Secondary Treatment Requirements" for information regarding pending litigation relating to the level of treatment currently provided by the Metropolitan System at the Point Loma Plant, the administrative waiver from secondary treatment standards of the Clean Water Act which the City has received, and pending legislation which would establish wastewater treated to an advanced primary level with certain chemically enhanced treatment and offshore discharge standards as being the equivalent of the secondary treatment standards of the Clean Water Act.

Several capital improvement projects have been completed at the Point Loma Plant to rehabilitate, modify and expand various components, and additional capital improvements are planned. In August 1994, a Capital Improvements Master Plan for the Point Loma Plant was approved that contemplates the build out of the facility to its maximum hydraulic capacity of 240 mgd. It is expected the improvements will be completed by 2000 and these improvements are included in the Wastewater System Capital Improvement Program described herein. Ongoing capital improvements include construction of two new sedimentation basins for a total of twelve basins,

construction of a new effluent channel to all of the sedimentation basins, repair and modernization of two of the six digesters, construction of a new sludge pumping station, and restoration of the ocean outfall intake structure. Projects under design include two additional digesters, upgrade of the headworks, odor control and grit removal facilities, modernization of four existing digesters, a new Operations Building, expansion of the Gas Utilization Facility, a Central Boiler Facility, automation of Process Control Facilities, and expansion of the Maintenance Building. All of these proposed improvements are included in the Wastewater System Capital Improvement Program described herein. See "WASTEWATER SYSTEM CAPITAL IMPROVEMENT PROGRAM."

*Point Loma Plant Ocean Outfall.* The Point Loma Plant ocean outfall was constructed in 1963 to provide a method for disposal of all plant effluent. The original capacity of the 11,316-foot long, 108-inch diameter outfall has been estimated at 390 mgd under the original design configuration. The City commenced construction in 1992 of a 12,500-foot extension of the original outfall (the "Point Loma Plant Ocean Outfall Extension"). The Point Loma Plant Ocean Outfall Extension was completed in November 1993 resulting in a 4.5 mile long outfall discharging treated sewage effluent at a depth of 320 ft. of water. It is one of the longest, deepest ocean outfalls in the U.S. Because of this project, the City was able to meet its NPDES permit requirements every day of calendar year 1994 and in every month for which data is available for calendar year 1995. While it was previously contemplated that a new, parallel tunnel outfall would be constructed along side the existing ocean outfall, it does not appear that the tunnel outfall will be needed in the foreseeable future.

*Fiesta Island Sludge Drying Facilities; Northern Sludge Processing Facility (referred to as the Fiesta Island Replacement Project/Northern Sludge Processing Facility or FIRP/NSPF).* A portion of Fiesta Island, located in Mission Bay, is currently utilized by the City for mechanical dewatering and air drying of sewage sludge. Since 1963, digested liquid sludge at 3% solids has been pumped from the Point Loma Plant through an 8 mile pipeline to Fiesta Island. At the facility, mechanical belt filter presses provide initial dewatering functions. Solar energy dries the sludge cake in open sand drying beds. When the sludge solids content reaches 50%, the dried sludge is transported off-site for either beneficial use or landfill disposal. The California Coastal Commission has directed that the City vacate its sludge drying facilities at Fiesta Island since the use of the island for sludge processing has been determined to be incompatible with its intended recreational use and is imposing mitigation charges on the City until the facilities are vacated. The charges have been approximately \$2 million for each of the three fiscal years ended June 30, 1993, 1994, and 1995. For the fiscal year ending June 30, 1996, the California Coastal Commission has reduced the charges to \$1.5 million as a result of the progress that has been made constructing the replacement facilities described below. These charges all have been paid from System Revenues to the City's Department of Parks and Recreation. The City is committed to close the Fiesta Island facility by December, 1997.

The City has commenced the construction of replacement facilities on a site at Miramar Naval Air Station (the "Northern Sludge Processing Facility") which it expects to lease from the United States Navy under a 50-year lease requiring Congressional approval. The City expects to receive Congressional approval by August, 1996. Currently, the City is constructing the replacement facilities under a license arrangement. In the event the lease were not approved by Congress, the City may have to locate the replacement facilities elsewhere or would be delayed in completing removal from Fiesta Island pending an attempt to renegotiate lease terms with the Navy. The City may spend approximately \$100 million in design, construction and other related costs for the replacement facilities prior to Congressional action on the lease.

The lease also permits the Navy to terminate the lease for convenience during its term, without the payment of any compensation to the City. The overall capital budget for the replacement facilities to be located at the Miramar site is expected to be approximately \$213 million. If the lease were terminated during its term by the Navy, the City would be obliged to relocate this facility elsewhere. Under the lease, the City would have to vacate the site only in the event of a national or military emergency. The existence of this facility is an essential part of the administrative waiver from secondary treatment requirements received by the City described under the caption "ACTIONS UNDER THE CLEAN WATER ACT - Relief From Secondary Treatment Requirements."

The Northern Sludge Processing Facility will include mechanical dewatering. A sludge drying facility is also proposed to be located at the Northern Sludge Processing Facility. The sludge drying facility as proposed will be undertaken by a for-profit enterprise and will produce agricultural fertilizer pellets. Other beneficial use options such as composting and direct land application are being considered along with landfill disposal. In addition,

another private operator may operate a cogeneration facility at the site. Under the agreement with the cogeneration operator, the City bears the risk of loss of the value of the facilities of the cogeneration operator should the City's lease with the Navy be terminated. Negotiations are continuing with the private sludge operator.

**Pump Stations.** The two pump stations began operation in 1963. The pumping facilities are in good condition, and all structures, including wet wells, are expected to last at least another 25 years. No major modifications or improvements are anticipated except for installation of additional new pumps and motors and overhauls of existing pumps and motors, as needed.

**Interceptors.** The Metropolitan System interceptors consist of two major branches, the South Branch and the North Branch, which meet at Pump Station No. 2. Interceptor capacities are normally adequate for current peak flow, but in the near future some interceptor sections may be subject to peak flows that exceed design capacities. Under the Wastewater System Capital Improvement Program, it is contemplated that expenditures of \$72.43 million will be made for interceptors during the eight fiscal years ending June 30, 2003. Construction projects are currently underway to address these future capacity needs. See "WASTEWATER SYSTEM CAPITAL IMPROVEMENT PROGRAM - Capital Improvement Projects - Major Interceptors (North and South)" for a description of the proposed improvements to the interceptors.

#### ***Additional Contractual Capacity Through the Escondido Wastewater Treatment Plant***

In addition to the Metropolitan System facilities described above, the City in 1972 entered into a sewage disposal agreement with the City of Escondido, whereby up to 5 mgd of sewage emanating from the Rancho Bernardo sewer service area of the City of San Diego, may be treated at Escondido's Hale Avenue treatment plant. This agreement runs for 50 years, and at the City's option may be extended for an unlimited number of ten year periods. The Escondido Wastewater Treatment Plant is not owned by the City and is not part of the Metropolitan System.

#### ***Historical Wastewater System Flow***

Table 2 below shows total annual system flow through the Point Loma Plant and Escondido Plant.

**Table 2**  
**TOTAL ANNUAL WASTEWATER SYSTEM FLOW IN MILLION GALLONS**

<b>Fiscal Year Ended June 30</b>	<b>City Flow through Point Loma Plant</b>	<b>Participating Agency Flow through Point Loma Plant</b>	<b>City Flow through Escondido Plant</b>	<b>Total System Flow</b>	<b>Average MGD For The Year</b>
1965	16,440	6,703	420	23,563	65
1970	19,950	9,658	709	30,317	83
1975	26,125	13,269	562	36,739	101
1980	36,708	17,572	944	55,224	151
1985	39,397	20,246	1,218	60,861	167
1990	48,628	20,836	1,405	70,868	194
1991	45,602	19,218	1,365	66,185	181
1992	46,030	18,115	1,177	65,322	179
1993	48,680	20,092	1,318	70,090	192
1994	45,043	19,111	1,310	65,464	179
1995	46,802	19,724	1,321	67,847	186

For the fiscal year ended June 30, 1995, the Metropolitan System on a daily basis treated and disposed of more than 186 million gallons of sewage generated by approximately 1.7 million residents and businesses within the Metropolitan System service area.

### ***The Participating Agencies and Sewage Disposal Agreements and Other Agreements***

The Metropolitan System provides "wholesale" treatment services, including some sewage transport, treatment and disposal operations to other cities and districts pursuant to Sewage Disposal Agreements with such entities (the "Sewage Disposal Agreements"). The Cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa and National City, and the Lemon Grove Sanitation District and the Spring Valley Sanitation District (the "Original Participating Agencies") entered into the Sewage Disposal Agreements in 1960. Subsequent to that time the City entered into Sewage Disposal Agreements with the Cities of Del Mar and Poway and the Lakeside/Alpine Sanitation District, the Otay Water District, the Padre Dam Municipal Water District and the Wintergardens Sewer Maintenance District (the "Later Participating Agencies"). The Original Participating Agencies and the Later Participating Agencies are collectively referred to as the "Participating Agencies." The Participating Agencies and the City are responsible for the "retail" collection operations within their respective jurisdictions. The Participating Agencies also transport collected sewage through large trunk lines to the Metropolitan System. The collection systems and many of the transport trunk lines are owned by the individual Participating Agencies. The City bills the Participating Agencies quarterly on the basis of budgeted estimates and sewage flows. In the following fiscal year, when actual costs and flows are known and apportioned to each Participating Agency, billing adjustments are made to correct for any under or over charges in the previous year.

Each Participating Agency is responsible for transporting raw sewage to the Metropolitan System for treatment and disposal. The operational and administrative responsibilities and obligations of the City and each Participating Agency are defined in the Sewage Disposal Agreements. Under the terms of the respective Sewage Disposal Agreements, each Participating Agency pays an Annual Capacity Charge for their respective leased shares of the capacity allocated in the Metropolitan System which is amortized over a 40 year term. In addition to the payment of the Annual Capacity Charge, the Participating Agencies pay for their proportionate share of the maintenance and operations expenses of the Metropolitan System. Each Participating Agency pays an amount equal to that proportion of the total maintenance and operations expenses which the actual amount of sewage received from the Participating Agency bears to the total quantity of sewage treated and disposed of by the Metropolitan System. Presently, the maintenance and operations costs are recovered on the basis of flows without consideration of strength of discharge.

The Sewage Disposal Agreements provide that all repairs, reconstruction and replacements to the Metropolitan System are part of the maintenance and operations costs allocated to the Participating Agencies. The Sewage Disposal Agreements also provide that the conveyance, treatment and disposal of all sewage received into the Metropolitan System must comply with all applicable laws, rules and regulations. The Sewage Disposal Agreements with the City of Poway, the Lakeside/Alpine Sanitation District, the Padre Dam Municipal Water District and the Wintergardens Sewer Maintenance District, require such Later Participating Agencies to pay their proportionate share of the cost of expanding the Point Loma Plant to a capacity of 234 mgd of advanced primary treatment. The Original Participating Agencies are not required to pay the costs of such expansion.

In 1991, a dispute arose between five of the Participating Agencies (Chula Vista, El Cajon, La Mesa, Imperial Beach and the Padre Dam Municipal Water District) and the City regarding these Participating Agencies paying a portion of the capital cost for the Fiesta Island Replacement Project and the Point Loma Plant Ocean Outfall Extension. All Participating Agencies currently are paying, although certain agencies are paying under protest, those certain capital, administrative, maintenance, and operations charges billed to them by the City which relate to the Fiesta Island Replacement Project and the Point Loma Plant Ocean Outfall Extension. For the fiscal years 1996 through 2003, the Participating Agencies' estimated share of the capital costs for these projects is \$107,800,000. The Participating Agencies' estimated share of costs related to the interest expense and administrative costs of bond financings are not included in this amount. Through the fiscal year ended June 30, 1995, the Participating Agencies were responsible for an estimated \$37,869,000. The Participating Agencies have paid all costs related to these expenses that have been billed to them. In the opinion of the San Diego City Attorney, the Participating Agencies' contested charges are legally due and payable to the City pursuant to their

Sewage Disposal Agreements because such charges relate to compliance with State laws and administrative agency orders.

In addition, in March 1995, the City began billing the Participating Agencies for their pro rata share of costs associated with water reclamation projects incurred on or after November 1, 1994. The City selected November 1, 1994, because secondary treatment administrative waiver legislation described under "ACTIONS UNDER THE CLEAN WATER ACT - Relief From Secondary Treatment Requirements" became effective on October 31, 1994. Although the City believes that all costs associated with water reclamation are allocable to the Participating Agencies, this cutoff date was proposed as a means of avoiding disputes with the Participating Agencies. The Cities of Chula Vista and Poway, the Otay Water District, and the Padre Dam Municipal Water District paid under protest their proportionate share of the costs billed to them. The Cities of Coronado, Del Mar, El Cajon, Imperial Beach, La Mesa and National City, the Lakeside/Alpine Sanitation District, the Lemon Grove Sanitation District, the Spring Valley Sanitation District, and the Wintergardens Sewer Maintenance District, however, withheld their proportionate shares of certain Metropolitan System administrative costs and water reclamation costs that were billed to them until their disputes could be arbitrated. In July 1995, the City brought an action to compel the Participating Agencies which had withheld their payments to honor their contractual agreements to pay their invoices. In August 1995, the court in this action ordered these Participating Agencies to pay all pending invoices and prohibited future withholdings of payments. In the absence of a settlement with the Participating Agencies regarding these disputed costs, the Participating Agencies' disputes will be arbitrated in the near future. For the fiscal years 1996 through 2003, the Participating Agencies' estimated share of the capital costs for these projects is \$56,253,000. The Participating Agencies' estimated share of costs related to interest expense and administrative costs of bond financings are not included in this amount. Through the fiscal year ended June 30, 1995, the Participating Agencies were responsible for an estimated \$12,347,000 for water reclamation costs. The Participating Agencies have paid all costs related to these expenses that have been billed to them. It is possible that some or all of these amounts could be repayable to the Participating Agencies if the City should not prevail in the arbitration. The City has not taken into income any amounts related to the disputed charges but is holding these amounts in reserve. Further, the financial projections contained under the caption "FINANCIAL PROJECTIONS" do not reflect any revenue from the disputed charges.

The City has covenanted in the Installment Purchase Agreement to establish and maintain sewer service charges and other revenues sufficient to make Installment Payments irrespective of the amount or promptness of payments received from the Participating Agencies. Thus, in the unlikely event of a long-standing delinquency or a refusal to make contract payments under a Sewage Disposal Agreement, the City would still be required under the Installment Purchase Agreement to provide Net System Revenues sufficient to provide for 1.2 times the Debt Service in each fiscal year to make all Installment Payments when due.

Key provisions of the Sewage Disposal Agreements include:

*Term of Sewage Disposal Agreements.* The Sewage Disposal Agreements expire on August 31, 2003 for the Original Participating Agencies, and June 30, 2003 for the Later Participating Agencies.

*Limitations on the Type and Condition of Sewage.* Participating Agencies must meet discharge standards established by State and Federal statutes and City Ordinances. Enforcement responsibilities, however, are not specified.

*Administration, Maintenance, and Operation.* The City has responsibility for operating, maintaining and managing the Metropolitan System.

*Maintenance and Operations Costs.* Maintenance and operations costs are allocated between the City and the Participating Agencies based on flow and are payable quarterly.

*Annual Capacity Charge.* Participating Agencies are also allocated capital improvement and debt service costs based on the actual capital cost initially incurred by the City to construct the Metropolitan System, including all financing costs, amortized over the financing term. These payments are made annually in one installment.

**New Construction.** The City can propose additions or modifications to the existing Metropolitan System. Participating Agencies which use the new facilities must negotiate changes in charges or will be assessed a predetermined rental fee and a proportionate share of maintenance and operations expenses.

**Option to Extend.** Each Participating Agency may, at its option, unilaterally extend the current service agreement for a period of ten years without the consent of the City. If a Participating Agency elects to extend its Sewage Disposal Agreement, such Participating Agency must give written notice to the City no earlier than eighteen months and no later than one year prior to the expiration date described above.

**Reclamation of Water.** The City has the exclusive right to reclaim water at its own expense. Any reclaimed water will be the property of the City. In the event the City voluntarily elects to reclaim water, the capital and operating costs of reclamation are solely of the City. However, the City Attorney is of the opinion that the proposed reclamation projects do not fall within these provisions because, in part, the City is required to reclaim water as a result of compliance with the law and a court order, thereby making the capital and operating costs of water reclamation allocable to the Participating Agencies on a proportionate basis under the Sewage Disposal Agreements.

**Capacity Rights.** The City has also entered into sewage transportation agreements with several Participating Agencies. These sewage transportation agreements established the terms and conditions for sewage transportation from Participating Agency collections systems to the Metropolitan System through City owned trunk lines. These trunk lines are within the City's Municipal System and are not presently part of the Metropolitan System infrastructure. The agreements establish charges or rents for the conveyance of wastewater based on Participating Agency flow. The charges or rents paid by the Participating Agencies constitute a part of System Revenues. Transportation agreements are separate and distinct from the Sewage Disposal Agreements.

Capacity rights may be added, assigned, or transferred by or among Participating Agencies with the approval of the City as owner of the Metropolitan System and holder of all reserve or residual capacity. New participants may join the Metropolitan System if approved by the City and after notification to the other Participating Agencies.

For the fiscal year ended June 30, 1995, out of a total annual sewage flow of 66,525 million gallons, the total City flow through the Metropolitan System was 46,802 million gallons, or 70.35% of the total flow. This overall proportion of the flow from the City and from the Participating Agencies is expected to continue.

Participating Agencies in the Metropolitan System are listed in the following table, together with the estimated population, present capacity rights (in mgd), and the percentage of total capacity represented by the capacity rights. The communities and agencies served by the Wastewater System form the second largest integrated metropolitan area in the State surpassed only by the Los Angeles metropolitan area.



**Table 3**  
**METROPOLITAN SYSTEM**  
**PARTICIPATING AGENCIES**  
**Fiscal Year Ended June 30, 1995**

<u>Participating Agencies</u>	<u>Estimated Population<sup>(1)</sup></u>	<u>Capacity Rights (in mgd)</u>	<u>% of Total Capacity</u>	<u>Flow (mgd)<sup>(4)</sup></u>	<u>% of Total Flow</u>
City of Chula Vista <sup>(2)</sup>	153,400	19.20	8.21	8.86	4.86
City of Coronado	29,300	3.00	1.28	2.79	1.53
City of Del Mar	5,200	0.80	0.34	0.68	0.37
City of El Cajon	93,400	10.00	4.27	7.99	4.38
City of Imperial Beach	28,350	3.50	1.50	2.22	1.22
City of La Mesa	57,500	6.30	2.69	5.28	2.90
City of National City	54,900	7.10	3.04	3.35	1.84
City of Poway	46,150	5.00	2.14	3.04	1.67
Lakeside/Alpine Sanitation District <sup>(3)</sup>	31,994	4.47	1.91	3.14	1.72
Lemon Grove Sanitation District	25,200	2.80	1.20	1.63	0.90
Otay Water District	28,000	1.20	0.51	0.52	0.29
Padre Dam Mun. Water District	127,903	6.22	2.66	3.78	2.08
Spring Valley Sanitation District	74,514	10.70	4.57	9.80	5.37
Wintgardens Sewer Maintenance District	<u>9,246</u>	<u>1.21</u>	<u>0.52</u>	<u>0.96</u>	<u>0.52</u>
<b>SUBTOTAL</b>	<b>765,057</b>	<b>81.50</b>	<b>34.84</b>	<b>54.04</b>	<b>29.65</b>
City of San Diego	1,202,500	152.42	65.16	128.22	70.35
<b>TOTAL:</b>	<b>1,967,557</b>	<b>233.92</b>	<b>100.00</b>	<b>182.26</b>	<b>100.00</b>

(1) Source: Participating Agencies and California Department of Finance.

(2) Includes Montgomery Sanitation District.

(3) A single meter serves the sanitation districts of Lakeside and Alpine.

(4) Average for fiscal year. Not adjusted for flows between individual Participating Agencies.

As the foregoing table illustrates, the Participating Agencies are currently not utilizing all of their capacity rights for sewage treatment and disposal.

## WASTEWATER SYSTEM REGULATORY REQUIREMENTS

### *General*

The Wastewater System is subject to regulations imposed by the Clean Water Act, Public Law 92-500 (the "Clean Water Act"). The regulatory requirements are administered by the United States Environmental Protection Agency (the "EPA"), the California State Water Resources Control Board (the "SWRCB") and the San Diego Regional Water Quality Control Board ("SDRWQCB"). Regulations of these agencies deal primarily with the quality of effluent which may be discharged from the Point Loma Plant, the disposal of sludge generated by the Point Loma Plant, the discharge of pollutants into groundwater, and the nature of waste material (particularly industrial waste) discharged into the collection system. The Point Loma Plant functions as an advanced primary treatment plant. However, the Clean Water Act currently requires that all sewage be subject to secondary treatment. As a condition of having received federal EPA grant funds under the Clean Water Act for the planning and construction of various improvements at its Point Loma Plant, the City is subject to additional regulatory requirements. Among the grant-related requirements are guidelines which must be followed concerning planning methodologies, design criteria, construction activities, and the operation, maintenance and financing of facilities.

To comply with federally mandated effluent quality and disposal criteria, the City must operate its wastewater treatment facility according to discharge limitations and reporting requirements set forth in its NPDES discharge permits. The NPDES permit for the Point Loma Plant was renewed on December 17, 1990 and has a five-year life. It is expected that this permit will be renewed prior to its expiration date. All conditions of the permit are being successfully met.

To comply with other federal regulations concerning the discharge of waste materials into the Wastewater System, the City must administer and enforce industrial pretreatment limitation standards upon industrial users of the system. The City has had an industrial waste program in effect since the early 1970s. The City's industrial waste ordinance sets forth water quality standards that industrial users must meet and provides enforcement procedures for violators. The Industrial Waste Division of the MWWD is currently responsible for monitoring over 1,300 permitted industries located in the metropolitan service area. In addition, each Participating Agency is required to permit and monitor all industries within its respective service area. While each Participating Agency as a condition of its respective Sewage Disposal Agreement is required to comply with quality standards set by the City, the City, at the urging of the EPA, has required separate pretreatment agreements with each Participating Agency to ensure industrial pretreatment requirements. All but one of the Participating Agencies have entered into such pretreatment agreements.

As a condition of its past receipt of federal grants, the City and the Participating Agencies must have approved sewer service charge structures. Such service charge structures require the recovery of annual operations, maintenance and replacement costs from users of the system in a proportionate manner according to the customer's level of use. Such factors as volume, infiltration/inflow, delivery flow rate, and strength of sewage are to be considered for determining proportionate use. Sewer service charge rates for all retail users are reviewed annually and established at a level necessary to generate sufficient revenues to recover the annual operations, maintenance and replacement costs. With the exception of the Participating Agencies which are charged rates purely based on flow, sewer service charge rates for users are established to recognize the volume and strength characteristics of wastewater contributed to the Wastewater System. The rate structure has been reviewed by the SWRCB and no grant funds or costs under grant funded programs have been disallowed based on the nature of the rate structures. However, see "SPECIAL CONSIDERATIONS FOR BONDHOLDERS" for discussion of certain issues related to right-of-way charges.

In addition to federal requirements, the City must also comply with water quality based effluent State requirements, otherwise known as the State Ocean Plan. The City is in compliance with the State Ocean Plan.

The primary State law concerned with control of water quality is the Porter-Cologne Water Quality Control Act of 1969, as amended. The Porter-Cologne Act directly addresses the problem of water reclamation and reuse. A declared policy of the law is that the people of the State have a primary interest in the development of facilities to reclaim wastewater to supplement existing surface and underground water supplies in order to meet their water requirements. The legislative intent was to undertake all possible development of water reclamation facilities to make reclaimed water available for use. The law requires the State Department of Health Services to establish statewide reclamation criteria for each type of use where such use involves public health. The City's proposed water reclamation projects are subject to the Porter-Cologne Act and are being designed in consultation with State officials to comply with its requirements.

### ***Recent Compliance Actions and Other Litigation***

In September 1993, the Executive Officer of the SDRWQCB filed two complaints for administrative civil liability against the City. The first complaint generally alleged that the City improperly discharged pollutants to surface waters, failed to notify and submit written reports to the SDRWQCB of alleged sewage spills, and inaccurately reported the estimated volume of sewage discharged during such alleged spills. In September 1993, the SDRWQCB, in accordance with the recommendation of the Executive Officer, imposed civil damages in the amount of \$830,000, which was the maximum amount allowed by law. The City's appeal to the SWRCB was declined. Thereafter the City filed a petition for a writ of mandate in Superior Court. In February 1995, the court granted the City's petition and overturned the penalty, finding no evidence in the record to support the award. While the Superior Court eliminated the penalty, it did allow SDRWQCB to rehear the matter anew. On October 5,

1995, the Executive Officer of the SDRWQCB filed a new complaint for administrative civil liability against the City in the amount of \$3,750,000. A hearing on this matter is scheduled for November 27, 1995. The City is challenging both the liability and the amount of the penalty.

The second complaint before the SDRWQCB alleged that since 1987 the City had violated effluent limitations at the Point Loma Plant due to ineffective sludge processing. In October 1993, the SDRWQCB imposed a \$2.5 million penalty but suspended the entire amount on the condition that the sludge processing facility be upgraded to comply with certain removal standards by January 27, 1994. The City promptly commenced a \$7 million upgrade of the facility and the upgrades have been completed. By the January 27, 1994 deadline the City was meeting all applicable removal standards for its effluent in accordance with the SDRWQCB's conditions. However, the Executive Officer disputed that a sufficient amount of upgrading equipment was in place and in February 1994 issued a letter demanding payment of the suspended \$2.5 million penalty. The City is appealing the Executive Officer's decision.

In another action, the Surfrider Foundation filed a petition in Superior Court for a writ of mandate against the City on June 29, 1995. The petition alleges that the City did not comply with the California Environmental Quality Act ("CEQA") when it prepared an environmental impact report for its involvement in the South Bay Ocean Outfall, an outfall from the federal government's international sewage treatment plant. See "WASTEWATER SYSTEM CAPITAL IMPROVEMENT PROGRAM - Capital Improvement Projects" for information regarding the South Bay Ocean Outfall project. The City has contracted to be the construction manager for the outfall as well as to have a 39.9% ownership interest in the outfall.

The petition seeks an order to set aside the City's approval of the environmental impact report and require the City to prepare a report which complies with CEQA. Cost of the suit and attorneys' fees are sought but no damages or penalties are alleged. The suit is set to proceed to trial on January 11, 1996. The City is actively contesting the allegations of inadequacy of the report.

## **ACTIONS UNDER THE CLEAN WATER ACT**

### ***General***

In 1972, Congress enacted the Clean Water Act, which among other things, directed the EPA to monitor and to regulate the discharge of pollution into navigable water ways and to enforce the requirement that all wastewater treatment plants in the nation provide full secondary treatment for sewage. The City's Point Loma Plant currently only provides advanced primary treatment. In 1977, Congress amended the Clean Water Act to allow waivers of secondary treatment standards for certain ocean dischargers.

### ***City Action under the Clean Water Act***

In September 1979, the City submitted an application to the EPA for a waiver from the secondary treatment standards based upon the EPA's proposed waiver regulations. The EPA tentatively approved the City's waiver application in September 1981. A revised waiver application incorporating updated flow projections was submitted to the EPA in November 1983. However, in September 1986, the EPA reversed its tentative approval of the City's 1979 waiver application and tentatively denied the City's 1979 and 1983 applications. In February 1987, the City Council decided to discontinue its efforts to obtain a waiver.

### ***Litigation and Proposed Consent Decree***

In July 1988, the United States of America, acting through the Department of Justice and the EPA, and the State of California filed suit against the City in U.S. District Court for alleged violations of the Clean Water Act, its NPDES permit, sewer overflows, and alleged irregularities in the City's pretreatment program that regulates industrial waste. The plaintiffs sought injunctive relief and monetary damages for alleged effluent limit violations, failure to meet secondary treatment standards, past sewer spills, and pretreatment violations. The lawsuit was divided into a penalty proceeding and a remedies proceeding.

*Penalty Proceeding.* In the penalty proceeding, the District Court found the City in violation of the Clean Water Act as a result of deficiencies in its pretreatment program (control of industrial users), frequent spills from the collection system, and the absence of secondary treatment. In June 1991, the District Court imposed a penalty of \$3,000,000; \$500,000 was payable to the U.S. Treasury on entry of judgment, with the remaining \$2,500,000 to be satisfied by means of an optional credit project. This credit project consisted of enactment of an ordinance requiring water conservation fixtures on all new construction, resales and remodels of buildings combined with a rebate program for water conservation fixtures in the minimum amount of \$500,000 for each of five years. Failure to fund the rebate program for water conservation fixtures would require payment of \$2,500,000 to the U.S. Treasury. Since the beginning of the fiscal year ended June 30, 1992, the City has spent an average of approximately \$1,000,000 a year on the rebate program.

This order on penalties has been fully satisfied with the City paying the \$500,000 monetary fine and by enacting ordinances which establish the requisite rebate program and requiring the installation of water conserving plumbing fixtures in all new construction or upon property transfer or remodeling. To date, no party has filed any action challenging the satisfaction of the penalty order. The City will complete the mandates of the credit project by June 1996, but plans to continue the project.

*Remedies Proceeding.* Beginning in 1988, in order to settle the remedies aspect of the case, the City commenced the design of a plan to modify and enlarge the Metropolitan System to comply with the secondary treatment requirements of the Clean Water Act. The City further began discussions with the United States and the State of California to negotiate a Partial Consent Decree (the "Consent Decree"), in response to the lawsuit, which would resolve the City's obligations under the Clean Water Act to treat its effluent to secondary treatment standards. In October 1989, a program for full upgrade to secondary treatment was approved by the City. This proposal was called "Alternative IVa."

On January 30, 1990, the San Diego City Council approved the Consent Decree to accomplish the upgrade. The Consent Decree required construction of secondary treatment facilities (six water reclamation plants, one new secondary treatment plant and upgrade of the Point Loma Plant to secondary treatment capability), upgrade of the City's pretreatment of industrial waste program, spill reduction measures, and miscellaneous additional capital improvements. The costs of these improvements were estimated in 1992 to be approximately \$2.4 billion. The Consent Decree also required some improvements affecting only the Municipal System.

The Consent Decree was lodged with the District Court in January 1991. In June 1991, the District Court issued a memorandum decision and interim order deferring approval of the lodged Consent Decree on the following conditions: (i) all construction milestones of secondary treatment facilities set forth in the Consent Decree would be honored; (ii) a one year pilot test of the Point Loma Plant would be conducted in order to test various chemical enhancements to reduce suspended solids; and (iii) the City would complete and submit a water reuse master plan for water reclamation.

In May 1992, the City Council voted to request the District Court to revise its June 1991 interim order to permit a modified and reduced wastewater upgrade to eliminate five of six water reclamation plants and to preserve the Point Loma Plant at its existing level of advanced primary treatment. This proposal was called the "Consumers' Alternative."

In July 1992, the District Court agreed to modify its interim order provided that the City continue construction of a single water reclamation plant (the North City Water Reclamation Plant), the Point Loma Plant Ocean Outfall Extension (which is now completed), and certain Municipal System upgrades (which are expected to be completed in their entirety by December 1998). The Court, however, deferred the milestones of all projects not identified in the Consumers' Alternative. The United States and the State of California unsuccessfully challenged the District Court's interim order on appeal.

In February and March of 1994, the District Court heard testimony and arguments on the issue of whether the lodged Consent Decree should be issued as a final order. The City opposed entry, contending that changed circumstances and the broad reach of the Consent Decree were not in the public interest. In March 1994, the Court ruled that the Consent Decree was not in the public interest and thereby rejected it. Since the upgrading and

remedial requirements mandated by the Consent Decree were rejected, these would have to be determined by a revised decree or a trial to determine what remedial requirements would be required in order to bring the City into compliance with the Clean Water Act. Pending resolution of this, the court asked all sides to submit a proposed interim order which would show progress on needed projects until the final remedial requirements could be resolved. In July 1994, the City submitted a revised proposed interim order with the District Court. Several of the Participating Agencies filed objections with the Court regarding the interim order and the City's intention to bill them for costs associated with water reclamation. Specifically, the Participating Agencies asked the District Court to include in the interim order requirements which would prohibit the City from using the interim order to enforce provisions of their Sewage Disposal Agreements regarding billing for water reclamation. In August 1994, the District Court issued an interim order which, among other things, provided that the court did not intend that its order should alter the rights or obligations of any of the parties to the Sewage Disposal Agreements. The order required construction of approximately 42% of the capital improvement projects described below under "WASTEWATER SYSTEM CAPITAL IMPROVEMENT PROGRAM."

In January 1995, the District Court received evidence that all interim order projects were on schedule, and agreed to continue deferring construction of all secondary treatment upgrades until the EPA completed its evaluation of the City's application for a waiver from secondary treatment requirements. See discussion below under "Relief From Secondary Treatment Requirements" regarding the administrative waiver from secondary treatment standards of the Clean Water Act which the City has received and pending legislation which would establish wastewater treated to an advanced primary level with certain chemically enhanced treatment and offshore discharge standards as being equivalent to secondary treatment standards of the Clean Water Act.

#### ***Relief From Secondary Treatment Requirements***

On October 31, 1994, the Clean Water Act was amended to permit the granting of administrative waivers by the EPA from secondary treatment requirements for certain ocean discharge waste disposal systems such as the City's. The City filed an application with the EPA for a waiver in April 1995, and in August 1995 the EPA issued a tentative decision approving the waiver and a modified NPDES permit. On November 9, 1995, the EPA granted the City's request for a modified NPDES permit pursuant to an administrative waiver. The permit incorporated both federal NPDES and State wastewater discharge requirements, the upgrade of the Point Loma Plant to meet these requirements, and construction of water reclamation facilities capable of treating 45 mgd by the year 2010, all of which the Wastewater System Capital Improvement Program contemplates. The waiver does not in any way modify the existing interim order or the Wastewater System Capital Improvement Program. Hence, the assumptions contained in the Engineer's Statement of Feasibility which was completed prior to the grant of the waiver are still valid. The waiver has a term of five years from November 9, 1995 and the City would need to apply for successive five-year extensions in order to continue to be exempt from the secondary treatment standards of the Clean Water Act. There is no assurance that the EPA will grant additional waivers. However, the City believes there has been only one occasion to date where the EPA has failed to grant additional waivers after approval of the first waiver.

There is currently pending in the United States Congress legislation which amends the Clean Water Act and, if approved in its current form, would consider wastewater treated to an advanced primary level with certain chemically enhanced treatment standards and discharged in accordance with certain offshore discharge standards (which the City can meet based upon the pending legislation) to be the equivalent of secondary treatment standards. There can be no assurance that this pending legislation will become effective in its present form or at all.

Should the City be required at some future date to upgrade the Wastewater System to provide secondary treatment discharge of wastewater, the cost to provide that service would be substantial. This requirement would reduce the capacity of the Point Loma Plant from 234 mgd to 180 mgd and the Wastewater System would therefore be required to provide substantial additional capacity for the treatment of sewage. None of the costs for these upgrades are reflected in the projections contained under "FINANCIAL PROJECTIONS."

## WASTEWATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

### *General*

The Wastewater System Capital Improvement Program for the period July 1, 1993 through June 30, 2003, contains projects to upgrade the Municipal System and Metropolitan System. Internally, those projects managed by the MWWD are currently referred to as the "Metropolitan Wastewater Plan," which includes Metropolitan System projects and certain Municipal System projects as well. (Some of the projects were included in the "Consumers' Alternative," but added to these are a variety of South Bay facilities, including a water reclamation plant and sludge processing facilities.) The balance of the projects are managed by the WUD.

Table 4 shows the currently estimated costs of the overall Wastewater System Capital Improvement Program for the period July 1, 1995 through June 30, 2003, the end of what was formerly known as Phase I of the Consumers' Alternative.

**Table 4**  
**WASTEWATER SYSTEM CAPITAL IMPROVEMENT PROGRAM COSTS**  
**(July 1, 1995 through June 30, 2003)**

<u>Projects</u>	<u>Remaining Cost<sup>(1)</sup></u> <u>(In Millions)</u>	<u>Percent<sup>(2)</sup></u> <u>Complete</u>
<b>Metropolitan System Projects</b>		
Northern Biosolids Processing Projects	\$231.10	17 %
North City Water Reclamation Plant	57.57	55 %
Point Loma Plant Upgrade	146.95	17 %
<b>South Bay Projects</b>		
Water Reclamation Plant	83.79	2 %
Sewage Conveyance System	26.22	0 %
Ocean Outfall	172.84	13 %
Major Interceptors (North and South)	72.43	13 %
Mission Valley Water Reclamation Plant (Land Acquisition Only)	3.00	1 %
Other Metropolitan System Projects	<u>63.59</u> 857.49	56 %
<b>Municipal System Projects</b>	<u>451.03</u>	N/A
<b>Total</b>	<u><u>\$1,308.52</u></u>	

<sup>(1)</sup> The dollar amounts in this column (a) reflect the remaining amounts in the budget as of July 1, 1995, (b) give effect to assumed rates of inflation during the period covered, and (c) reflect amounts expected to be set aside for outstanding contracts during the period indicated without regard to the timing of expenditure of such amounts.

<sup>(2)</sup> The percentages in this column reflect the amounts spent on a project through June 30, 1995 compared to the total budget from origination of the project.

## *Capital Improvement Projects*

### *1. Metropolitan System*

*Northern Biosolids Processing Projects.* This project consists of the Northern Sludge Processing Facility FIRP Pump Station, FIRP Phase II Digested Sludge and Centrate Pipeline, North City Raw Sludge and Water Pipelines, and the Biosolids Demonstration Project. The recommended overall sludge management plan consists of sludge collection at each treatment plant, digestion at the Point Loma Plant of Point Loma Plant sludge and digestion of sludge for the reclamation plants at the Northern Sludge Processing Facility. Digested sludge from the Point Loma Plant and undigested sludge from the North City Water Reclamation Plant will be pumped to the Northern Sludge Processing Facility. A sludge drying facility is proposed to be located at the Northern Sludge Processing Facility. The sludge drying facility as proposed will be operated by a for-profit contractor and produce agricultural fertilizer pellets to be sold by the contractor. The City will be required to pay for the fixed and variable cost of the facility and maintenance and operations expenses. Other beneficial use options such as composting and direct land application are being considered along with a baseline disposal plan in a City-owned and operated monofill and/or co-disposal in permitted solid waste landfills. Energy to operate the Northern Biosolids Processing Project is currently planned to be provided using methane gas. The Northern Sludge Processing Facility will be located at Miramar Naval Air Station, north of the City, under a lease from the U.S. Navy to the City. See "WASTEWATER SYSTEM - Metropolitan System Facilities" for information regarding required Congressional approval for the lease and right of the Navy to terminate the same for convenience, without compensation.

*North City Water Reclamation Plant.* This facility is currently under construction. Process units include preliminary treatment by mechanically cleaned bar screens, grit removal and aerated grit tanks, primary treatment in rectangular sedimentation tanks, flow equalization following primary settling, secondary treatment by the activated sludge process with anoxic selectors, tertiary filtration, and effluent disinfection using sodium hypochlorite. Support facilities include an administration building, operation and maintenance building and chemical building. The 30 mgd capacity of the facility will be achieved by 1997. The reclaimed water generated by the plant will be distributed to users through a reclaimed water distribution system that will be financed by the City's Water Fund.

*Point Loma Plant Upgrade.* Under the Wastewater System Capital Improvement Program, an ultimate capacity of 240 mgd annual daily flow at the Point Loma Plant is envisioned, using the chemically assisted advanced primary treatment process. Ongoing full scale testing at the Point Loma Plant will define optimum chemical usage. Sludge digestion will be performed on-site with digested sludge being conveyed to the Northern Sludge Processing Facility for dewatering. Expansion of the Point Loma Plant will be implemented through construction of a series of projects that will not significantly disrupt wastewater flow during the construction period.

*South Bay Water Reclamation Plant.* This facility is planned to be completed by the year 2001 and will have a 7 mgd capacity. Reclaimed water produced by the plant will be conveyed through reclaimed water distribution pipelines to reuse markets in the South Bay. These reclaimed water pipelines will be financed by the City's Water Fund. Adding a further 8 mgd of capacity to this plant is one of the system-wide options available to the MWWD in order to meet the 45 mgd total water reclamation system capacity by the year 2010 as required by the administrative waiver described above under "ACTIONS UNDER THE CLEAN WATER ACT - Relief From Secondary Treatment Requirements." Access to and from the plant will be provided by construction of a bridge spanning the Tijuana River which will be financed as part of the facility.

*South Bay Sewer Conveyance System.* A pump station, force main and associated sewer pipelines will be constructed to convey wastewater to the South Bay Water Reclamation Plant.

*South Bay Ocean Outfall.* An outfall running seaward from the Tijuana River Estuary is being constructed under the auspices of the International Boundary and Water Commission ("IBWC"). The City is sharing the costs of the project based upon its peak flow requirements as a portion of the total peak flow capacity of the outfall. The outfall has a peak flow capacity of 333 mgd. The City's portion is 133 mgd. The anticipated completion date for this project is 1999.

*Major Interceptors (North and South).* The South Metro Interceptor is being rehabilitated to extend its useful life by the installation of a liner system. The North Metro Interceptor project consists of construction to increase the capacity of the pipeline from 153 mgd to 318 mgd. The North and South Metro Interceptors converge at a pump from which sewage is pumped via two force mains to the Point Loma Plant. The two force mains are being modified so that they may be isolated from each other to facilitate inspection and repair.

*Mission Valley Water Reclamation Plant (Land Acquisition Only).* Depending on development patterns and possible water reclamation demand requirements, a Mission Valley Water Reclamation Plant may be needed. See "ACTIONS UNDER THE CLEAN WATER ACT." To insure flexibility in the Metropolitan System configuration, \$7 million (\$4 million in fiscal year 1995 and \$3 million in fiscal year 1996) will be expended on the purchase of land in Mission Valley for the plant site.

*Other Metropolitan System Projects.* The MWWD continues to develop COMNET, a system-wide standardized means of providing the Metropolitan System with process control and monitoring. COMNET includes plant support as well as system communications. Additionally the MWWD continues to investigate various wastewater treatment technologies and utilize specialized engineering support to plan for the future and to maximize the cost effectiveness of the overall system configuration. Construction management services contracts and an owner controlled insurance program are also supported.

## **2. *Municipal System***

The rehabilitation and expansion of the Municipal System infrastructure is included in the Wastewater System Capital Improvement Program. Projects include the replacement of deteriorated concrete sewer collector lines, rehabilitation of sewer pumping stations and construction of new interceptor lines and pump stations as described below.

*Annual Allocations (\$329.8 million).* Annual allocations are included in a capital budget each year to cover projects that are not identified until after the beginning of the budget year. Annual allocations provide for as-needed consultant services, relocation of sewer lines as necessitated by the California Department of Transportation Highway Construction Program, replacement of sewer mains which may be deteriorated or under-sized, and replacement of deteriorated pumping equipment and/or appurtenances. Specific projects are identified on an as-needed, priority basis.

*Trunk and Interceptor Sewer Projects (\$96.6 million).* These projects are for the replacement, rehabilitation, expansion or construction of existing sewer lines and new sewer lines. These projects are specifically identified in advance of budget adoption and typically are larger and more expensive than projects accomplished through the annual allocations described below.

*San Pasqual Aquatic Treatment Facility - Phase II (\$17.2 million).* Phase I of this project consisted of a water reclamation plant. It was jointly funded by the Water Fund and the Sewer Revenue Fund. The reclaimed water produced by this plant is currently being used by various customers for irrigation purposes. Phase II, also jointly funded by the Water Fund and the Sewer Revenue Fund, will provide an additional use for the product of the plant to recharge the San Pasqual ground water basin.

*Pump Station Projects (\$5.1 million).* These projects are for the replacement, expansion or construction of existing sewer pump stations and new sewer pump stations. These projects are specifically identified in advance of budget adoption and typically are larger and more expensive than projects accomplished through the annual allocations.

*Telemetry Control System (\$2.4 million).* This project provides for a centralized, automated monitoring and control facility for the Wastewater System. The new telemetry control system will upgrade and centralize all telemetry system controls into one location to facilitate the tracking of data.



### *Contract Disputes*

From time to time, the City is engaged in disputes with contractors and subcontractors working on the Wastewater System Capital Improvement Program. There is currently pending approximately \$3,000,000 in contract disputes.

### **CAPITAL IMPROVEMENT FINANCING PLAN**

The projected Wastewater System Capital Improvement Program is funded by a combination of financing from Net System Revenues and debt financing. Table 5 summarizes the sources and uses of funds for the Wastewater System Capital Improvement Program for the fiscal years ending June 30, 1996 through June 30, 2003. The Wastewater System Capital Improvement Program includes the costs of the projects described in Table 4. If the City is obligated to provide secondary treatment at the Point Loma Plant, the capital costs of the Wastewater System Capital Improvement Program could be substantially increased. See "SPECIAL CONSIDERATIONS FOR BONDHOLDERS."

The current Wastewater System Capital Improvement Program financing plan contemplates an increase of approximately \$215 million in debt financing as compared with projections contained in the Official Statement dated September 30, 1993 for the Series 1993 Bonds (the "Prior Official Statement"). The primary reasons for this increase are that (i) the earlier projections contemplated a substantially higher level of growth than the current capital improvement financing plan; and (ii) the current projections contemplate transfers into a rate stabilization fund during certain years of the period, thereby reducing revenues in such year which would otherwise have been available for "pay as you go" capital expenditures. See "WASTEWATER SYSTEM FINANCIAL OPERATIONS."

**Table 5**  
**SOURCES AND USES OF FUNDS FOR CAPITAL EXPENDITURES**  
**WASTEWATER SYSTEM CAPITAL IMPROVEMENT PROGRAM**  
(In Thousands of Dollars)  
*Fiscal Years Ending June 30, 1996 to 2003*

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>Total</u>
<b>SOURCE OF FUNDS</b>									
Drawdown of Construction Fund	\$ 12,378	\$ 74,968	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 87,346
New Bond Issues	350,000	214,365	206,926	162,380	75,689	0	0	0	1,009,360
Grant Receipts	26,318	35,989	0	0	0	0	0	0	62,307
Contributions in Aid	13,252	46,482	39,378	0	0	0	0	0	99,112
Pay-as-You-Go	<u>41,909</u>	<u>59,978</u>	<u>2,953</u>	<u>2,038</u>	<u>33,137</u>	<u>54,928</u>	<u>64,553</u>	<u>72,564</u>	<u>332,060</u>
<b>TOTAL SOURCES</b>	<b>\$443,857</b>	<b>\$431,782</b>	<b>\$249,257</b>	<b>\$164,418</b>	<b>\$108,826</b>	<b>\$ 54,928</b>	<b>\$64,553</b>	<b>\$72,564</b>	<b>\$1,590,185</b>
<b>USES OF FUNDS</b>									
Issue Costs	\$ 4,375	\$ 2,679	\$ 2,586	\$ 2,030	\$ 946	\$ 0	\$ 0	\$ 0	\$ 12,616
Debt Service Reserve Fund	26,802	17,275	16,675	13,086	6,100	0	0	0	79,938
Reimbursement of Prior Capital Expenditures	29,208	0	0	0	0	0	0	0	29,208
Contribution to Construction Fund	74,968	0	0	0	0	0	0	0	74,968
Capital Expenditures (1) (2)	<u>308,504</u>	<u>411,828</u>	<u>229,996</u>	<u>149,302</u>	<u>101,780</u>	<u>54,928</u>	<u>64,553</u>	<u>72,564</u>	<u>\$1,393,455</u>
<b>TOTAL USES</b>	<b>\$443,857</b>	<b>\$431,782</b>	<b>\$249,257</b>	<b>\$164,418</b>	<b>\$108,826</b>	<b>\$54,928</b>	<b>\$64,553</b>	<b>\$72,564</b>	<b>\$1,590,185</b>
<hr/>									
(1) Capital Expenditures by System	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>Total</u>
Municipal System	42,220	49,752	59,067	40,744	43,294	48,824	62,210	70,966	417,077
Metropolitan System	<u>266,284</u>	<u>362,076</u>	<u>170,929</u>	<u>108,558</u>	<u>58,486</u>	<u>6,104</u>	<u>2,343</u>	<u>1,598</u>	<u>976,378</u>
Total System	\$308,504	\$411,828	\$229,996	\$149,302	\$101,780	\$54,928	\$64,553	\$72,564	\$1,393,455

- (2) Projected amounts to be set aside during this period for contracts for the Wastewater System Capital Improvement Program aggregate approximately \$1.308 billion. See Table 4. Table 5 describes projected cash expenditures for Wastewater System Capital Improvement Program projects rather than projected set asides.

## WASTEWATER SYSTEM FINANCIAL OPERATIONS

The City's primary sources of moneys deposited in the Sewer Revenue Fund are derived from sewer service charges to City residents and commercial enterprises, capacity charges on new, additional or larger connections to the Wastewater System within the City, revenues from the Participating Agencies pursuant to the Sewage Disposal Agreements and interest income on fund balances.

### *Establishment, Calculation and Collection of Sewer Service Charges*

Sewer service charges to City utility customers, which are collected with municipal water bills and enforceable by discontinuance of water service, have been collected by the City since 1956. Periodically, sewer service charges have been revised, the latest revision becoming effective July 1, 1994.

The City has dedicated personnel and resources to analyze rates and charges necessary to support the Wastewater System. They are responsible for collecting and collating revenue and expenditure data from key administrative, engineering, financial and budgetary City departments, then evaluating the adequacy of revenues and recommending rate adjustments in concert with debt size and timing. Once projected revenues and expenditures are validated, financing options are evaluated for the optimal mix of internally generated revenue and debt. This process, conducted biannually for management purposes and as required to facilitate planned debt issuances and rate adjustments, involves an extensive technical review by a multi-departmental finance team and detailed oversight from a senior management executive committee comprised of the City Manager, Auditor/Comptroller, Financial Management Director, the WUD Director, the MWWD Director, and Deputy City Attorney. After final review and validation, a Financing Plan is presented to the City Council for consideration, incorporating near-term debt and rate considerations as specific recommendations. See "City Council Action Relating to Rate Changes."

Sewer service charges are based on the characteristics (volume of sewage, or flow, and suspended solids, or strength) of the wastewater discharged by each particular sewer user. All sewer users are charged based upon the amount of flow and solids which they discharge into the Wastewater System. As sewage discharge is not metered, water sales are used to approximate each customer's sewage flow. Suspended solids are based upon the classification of the user, determined by site inspections and/or analyses as required or requested.

Single-family residential customers are billed based on average winter months' water usage. The monthly service charge for this customer type is set on July 1 of each year, based upon the individual customer's average water consumption during the previous winter months when the local area normally receives most of its annual rainfall and irrigation needs are minimized. Once set, the customer's monthly sewer service charge is fixed until the next July 1. For the fiscal year ending June 30, 1996, the minimum charge is a base fee of \$6.74 per month, and the maximum charge, including the base fee, is \$29.34 per month.

The historical sources of operating revenues of the Sewer Revenue Fund for the fiscal years ended June 30, 1991-95, are set forth in Table 6 below.

**Table 6**  
**HISTORICAL SOURCES OF OPERATING REVENUES<sup>(1)</sup>**  
(In Thousands of Dollars)  
*Fiscal Years Ended June 30, 1991 to 1995*  
(Unaudited)

<u>Source</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>
Single Family Domestic . .	\$40,724	\$44,120	\$48,639	\$53,213	\$56,550
Other Domestic . . . . .	30,785	30,476	34,520	36,416	38,784
Commercial . . . . .	25,885	25,512	29,749	28,299	30,660
Industrial . . . . .	7,438	6,953	5,266	6,773	7,173
Outside City . . . . .	10	7	6	8	9
Treatment Plant Service for Others <sup>(2)</sup> . . . . .	<u>15,541</u>	<u>28,881<sup>(3)</sup></u>	<u>26,986<sup>(3)</sup></u>	<u>32,360</u>	<u>31,612<sup>(3)(4)</sup></u>
<b>TOTAL . . . . .</b>	<b>\$120,383</b>	<b>\$135,949</b>	<b>\$145,166</b>	<b>\$157,069</b>	<b>\$164,788</b>

- (1) Does not include capacity charges or other operating revenues which are included in calculating Net System Revenues.  
(2) Includes revenues from Participating Agencies, the United States Navy and other agencies.  
(3) Reflects retroactive billings for costs of the Wastewater System Capital Improvement Program.  
(4) Certain Participating Agencies are making a portion of their payments under protest or pursuant to a court order. None of the amounts which were paid pursuant to a court order have been taken into income. All of such amounts were paid during the fiscal year ended June 30, 1995. See "WASTEWATER SYSTEM - The Participating Agencies and Sewage Disposal Agreements and Other Agreements."

The ten largest customers of the Municipal System, as measured by the fiscal year ended June 30, 1995 billings, are estimated to account for approximately 9.28% of the Sewer Revenue Fund's total revenues for that fiscal year. Table 7 shows the fiscal year ended June 30, 1995 billings for such customers and the related percentages of total revenues for the Sewer Revenue Fund.

**Table 7**  
**TEN LARGEST CUSTOMERS WITHIN MUNICIPAL SYSTEM<sup>(1)</sup>**  
**Fiscal Year Ended June 30, 1995**  
**(Unaudited)**

	<u>Billings</u>	<u>Percent of Total Sewer Fund Revenues<sup>(2)</sup></u>
United States Navy . . . . .	\$ 8,836,643	4.71 %
Kelco . . . . .	3,887,059	2.07
University of California, San Diego . . . . .	1,348,616	0.72
R.J. Donovan Prison . . . . .	730,883	0.39
City of San Diego . . . . .	659,963	0.35
San Diego Unified School District . . . . .	548,672	0.29
SONY . . . . .	465,283	0.25
Marine Park (Sea World) . . . . .	349,683	0.19
San Diego Zoo . . . . .	307,518	0.16
San Diego State University . . . . .	<u>290,202</u>	<u>0.15</u>
<b>TOTAL . . . . .</b>	<b>\$17,424,522</b>	<b>9.28 %</b>

(1) Does not include Participating Agencies or customers served by Participating Agencies.

(2) Total Sewer Revenue Fund revenues include all revenues of the Wastewater System and receipts from Participating Agencies.

Set forth below as Table 8 is a six-year rate history for sewage service charges.

**Table 8**  
**SIX-YEAR RATE HISTORY**  
**FOR SINGLE FAMILY RESIDENTIAL UNITS**  
**AND COMMERCIAL & INDUSTRIAL**

<u>Effective Date</u>	<u>Single Family Domestic</u>	<u>% Increase for Single Family Domestic Rates</u>	<u>Other Domestic, Commercial &amp; Industrial<sup>(1)</sup> (Monthly Charge)</u>	<u>% Increase for Other Domestic, Commercial &amp; Industrial Rates</u>
July 1, 1990	\$18.15	6.0%	\$0.32 plus Suspended Solids ("SS") Charge of \$1.044 to \$2.126 per hundred cubic feet (Hcf)	6.0%
July 1, 1991	19.24	6.0%	0.34 plus SS Charge of \$1.107 to \$2.254 per Hcf	6.0%
July 1, 1992	20.39	6.0%	0.36 plus SS Charge of \$1.173 to \$2.389 per Hcf	6.0%
July 1, 1993	21.61 <sup>(2)</sup>	6.0%	0.38 plus SS Charge of \$1.243 to \$2.532 per Hcf	6.0%
July 1, 1994	22.91	6.0%	0.40 plus SS Charge of \$1.318 to \$2.532 per Hcf	6.0%
July 1, 1995	22.91	0%	0.40 plus SS Charge of \$1.318 to \$2.532 per Hcf	0%

- (1) Other domestic, commercial and industrial monthly charges are based upon volume of flow and suspended solids. Charges range from the current base fee of \$0.40 per month to several hundred thousand dollars.
- (2) In this fiscal year, the City began sewer billings based on an average winter months' water usage. Previously, the City billed for sewer usage on a fixed flat fee. The percentage increase for the fiscal years beginning July 1, 1993 and thereafter represent estimated average increases.

### ***Accounts Receivable***

Billing is done primarily on a bi-monthly basis. Typically, the WUD seeks to collect unpaid bills by (i) issuing an initial shut-off notice as early as 30 days after a bill is issued, (ii) issuing a final shut-off notice as early as 45 days after a bill is issued, and (iii) shutting off the customer's water service as early as 50 days after a bill is issued. This procedure results in almost all past due bills being paid. If necessary, the WUD establishes time payments for customers who are unable to pay a past due amount. If an account is closed with an amount due which remains unpaid, that account is referred to the City Treasurer for collection activities. An allowance is taken each fiscal year for accounts receivable which are not expected to be paid. This amount has ranged from \$2,000,000 for the fiscal year ended June 30, 1991 to \$1,000,000 for the fiscal year ended June 30, 1995.

Table 9 sets forth information related to accounts receivable and number of shut-offs.

**Table 9**  
**SEWER CUSTOMER ACCOUNTS RECEIVABLE**  
**AND SHUT-OFFS BY FISCAL YEAR**  
(In Thousands of Dollars)  
For Fiscal Years Ended June 30, 1991 to 1995

(Unaudited)

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995<sup>(2)</sup></u>
Sewer Service Revenue <sup>(1)</sup>	\$120,383	\$135,949	\$145,165	\$157,070	\$164,788
Accounts Receivable <sup>(2)(3)</sup>	\$ 7,739	\$ 8,865	\$ 10,459	\$ 10,632	\$ 9,859
Accounts Receivable Over 120 Days <sup>(3)</sup>	\$ 529	\$ 561	\$ 540	\$ 730	\$ 1,076
No. of Shut-Offs <sup>(1)</sup>	16,370	16,677	17,152	16,738	14,983

(1) For the year ended June 30.

(2) Excludes amounts payable by Participating Agencies.

(3) As of June 30.

### *City Council Actions Relating to Rate Changes*

By a resolution, effective July 1, 1990, the City Council adopted a long range five-year revenue plan which established rate increases of 6% per year for monthly sewer rates, and 16% per year for capacity charges. These rate adjustments reflected a change from a pay as you go system of financing to a combination of debt and cash in recognition of the major wastewater capital improvements that would be undertaken to meet the requirements of the Clean Water Act, and to provide additional Wastewater System capacity. The last scheduled increase took effect on July 1, 1994. These rate increases are set forth in Table 8 above and Table 11 below.

Based on the current projections, additional rate increases will be required in the future to fund the Wastewater System Capital Improvement Program. See "FINANCIAL PREDICTIONS." In August 1995, the City Council, in response to the recommendation of the staff for additional sewer rate increases of 6% per year for each of the fiscal years ending June 30, 1996 and 1997, directed the staff to review the proposed budget for the fiscal year ending June 30, 1996, to determine if some of the projected expenditures could be reduced. The staff was able to reduce budgeted expenditures for maintenance and operations by approximately \$8 million (the amount of revenue expected to be generated from the requested rate increase) by lowering the projected amounts budgeted for chemicals for enhanced treatment of sewage (to reflect recent reduced usage of chemicals) and lowering budgeted expenditures for sludge hauling costs (again reflecting recent experience). It is contemplated that staff will seek a rate increase, currently expected to be 6% for the fiscal year ending June 30, 1997. The financial projections for the Wastewater System Capital Improvement Program are based upon such an increase, as well as increases in later years. See "FINANCIAL PROJECTIONS." In addition, the City is required to fix rates for the Wastewater System such that charges for wastewater services will be at least equal to pay all outstanding Obligations (other than Parity Obligations) and to provide Net System Revenues equal to 120% of Debt Service for the year. See "SECURITY FOR THE SERIES 1995 BONDS - Rate Covenant."

### *Collection and Calculation of Capacity Charges*

A capacity charge is a one-time fee for a new, additional or larger connection to the Municipal System within the City. Capacity fees are not treated as operating income for financial reporting purposes but are considered System Revenues and are deposited in the Sewer Revenue Fund. Pursuant to California law, capacity fees are applied only to capital expansion, bonds, contracts, or other indebtedness of the Wastewater System related

to expansion. Because capacity fees are primarily collected on new construction within the City, revenues obtained on such fees vary based upon construction activity and, reflecting a slow down in residential construction, the City's financing plan contemplates a significantly reduced level of capacity charge revenues when compared to the Prior Official Statement. See "FINANCIAL PROJECTIONS." Historical capacity charge revenues and equivalent dwelling units ("EDU") are shown in Table 10 below. Capacity charges are shown in Table 11.

*Table 10*  
**SEWER REVENUE FUND**  
**HISTORICAL CAPACITY CHARGE REVENUES**

<u>Fiscal Year Ended June 30</u>	<u>Equivalent Dwelling Units<sup>(1)</sup></u>	<u>Capacity Charge Revenues<sup>(2)</sup></u>
1986	15,460	\$15,093,242
1987	14,883	\$16,975,047
1988	6,830	\$10,736,525
1989	13,157	\$21,920,230
1990	6,489	\$22,252,058
1991	2,757	\$10,657,003
1992	2,762	\$12,385,388
1993	2,100	\$10,920,494
1994	2,509	\$15,136,994
1995	1,625	\$11,368,587

(1) Unaudited.

(2) Audited, except for fiscal year ended June 30, 1995.

*Table 11*  
**SIX-YEAR RATE HISTORY**  
**FOR SEWER CAPACITY CHARGES**

<u>Effective Date</u>	<u>Sewer Capacity Charges (Per Unit)</u>	<u>% Increase</u>
July 1, 1990	\$3,865	16%
July 1, 1991	\$4,484	16%
July 1, 1992	\$5,201	16%
July 1, 1993	\$6,033	16%
July 1, 1994	\$6,998	16%
July 1, 1995	\$6,998	0%

The City Council, in an effort to promote and encourage business development within the City, did not adopt a rate increase for capacity charges for the fiscal year beginning July 1, 1995.



### *Operations and Maintenance Expenses for Tijuana Effluent*

For over fifty years the Tijuana River, which flows northward from Tijuana, Mexico into southern San Diego County in the United States, has been a vehicle for the intermittent transportation of raw sewage. On April 15, 1991, the City Council adopted a resolution directing the City Manager to accept sewage from Tijuana, Mexico into the emergency connection of the Metropolitan System. Currently, the emergency connection has a capacity of 13 mgd. The City entered into an annual contract with the IBWC on July 22, 1991, with the condition that the IBWC seek funding from the U.S. Congress to reimburse the City for the use of the emergency connection at a rate of \$600/mg in the fiscal year ended June 30, 1993 and in subsequent years at a rate based upon the rate charged to commercial customers. In the event the Congress does not provide sufficient appropriations for the treatment of the Tijuana sewage, the City may terminate the contract. For the year ending September 30, 1996, the rate to be charged to the IBWC will increase to \$1,099/mg. The proposed Federal fiscal year 1996 budget includes \$450,000 for treatment of Tijuana sewage. The IBWC is planning the construction of a 25 mgd treatment plant in the Tijuana River Valley to treat Tijuana sewage. This plant is scheduled to be completed in 1997, after which time the emergency connection may no longer need to be used. The 13 mgd accepted through the emergency connection to the Metropolitan System can be shut down at any time should the Metropolitan System require additional capacity for the City or the Participating Agencies.

## Historical Revenues and Debt Service Coverage

Table 12 contains the Statement of Income for fiscal years ended June 30, 1991 through 1995, and Table 13 contains the Calculation of Debt Service Coverage for such years.

**Table 12**  
**WASTEWATER SYSTEM STATEMENT OF INCOME**  
**Fiscal Years Ended June 30, 1991 to 1995**

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u> <u>(unaudited)</u>
<b>OPERATING REVENUES</b>					
Sewer Service Charges:					
Inside City:					
Domestic .....	\$71,508,951	\$74,596,267	\$83,158,791	\$89,630,046	\$95,333,742
Commercial and Industrial .....	33,322,913	32,465,104	35,014,552	35,072,134	37,832,852
Outside City:					
Domestic, Commercial and Industrial .....	9,762	6,756	6,138	7,866	9,270
Treatment Plant Service for Others .....	<u>15,541,533</u>	<u>28,880,874</u>	<u>26,986,390</u>	<u>32,360,195</u>	<u>31,611,730<sup>(1)</sup></u>
<b>Total Sewer Service Revenues .....</b>	<b>120,383,159</b>	<b>135,949,001</b>	<b>145,165,871</b>	<b>157,070,241</b>	<b>164,787,594</b>
Other Operating Revenues:					
Aquaculture Operating Grants .....	962,749	1,410,760	(88,264)	227,550	312,234
Miscellaneous (Net) .....	<u>240,875</u>	<u>734,550</u>	<u>588,854</u>	<u>2,779,270</u>	<u>188,111</u>
<b>TOTAL OPERATING REVENUES .....</b>	<b>121,586,783</b>	<b>138,094,311</b>	<b>145,666,461</b>	<b>160,077,061</b>	<b>165,287,939</b>
<b>OPERATING EXPENSES .....</b>	<b><u>73,673,511</u></b>	<b><u>90,839,690</u></b>	<b><u>92,317,053</u></b>	<b><u>109,938,980</u></b>	<b><u>118,354,525</u></b>
<b>OPERATING INCOME .....</b>	<b><u>47,913,272</u></b>	<b><u>47,254,621</u></b>	<b><u>53,349,408</u></b>	<b><u>50,138,081</u></b>	<b><u>46,933,414</u></b>
<b>NON-OPERATING REVENUES (EXPENSES):</b>					
Interest Income .....	21,886,005	18,210,011	11,297,768	11,289,578	16,459,340
Gain (Loss) on Sale/Retirement of Fixed Assets .....	230,286	(261,019)	(1,244,597)	(6,316,466)	(32,027,997) <sup>(2)</sup>
Gain on Early Redemption of Bonds .....	48,725	3,689	8,262	0	0
Interest Expense - Revenue Bonds .....	(845,673)	(759,467)	(663,368)	(8,355,755)	(12,467,426)
Reverse Repurchase - Interest Expense .....	(3,149,672)	(1,000,212)	(538,465)	(740,345)	(2,529,402)
Other .....	<u>7,458,773</u>	<u>0</u>	<u>8,414,603</u>	<u>191,065</u>	<u>1,302,334</u>
<b>TOTAL NON-OPERATING REVENUES (EXPENSES) .....</b>	<b><u>25,628,444</u></b>	<b><u>16,193,002</u></b>	<b><u>17,274,203</u></b>	<b><u>(3,931,923)</u></b>	<b><u>(29,263,151)</u></b>
Operating Transfer In .....	24,840,106	90,377	0	0	80,896
Operating Transfer Out .....	<u>(27,985,005)</u>	<u>(500,000)</u>	<u>(500,000)</u>	<u>(1,109,403)</u>	<u>(1,414,104)</u>
<b>NET INCOME</b>	<b><u>\$70,396,820</u></b>	<b><u>\$63,038,000</u></b>	<b><u>\$70,123,611</u></b>	<b><u>\$45,096,755</u></b>	<b><u>\$16,337,055</u></b>

(1) \$15,286,325 of revenues billed and received from the Participating Agencies have not been included as the Participating Agencies are disputing the billings. See "WASTEWATER SYSTEM - The Participating Agencies and Sewage Disposal Agreements and Other Agreements."

(2) See "Management's Discussion and Analysis - Gain (Loss) on Sale/Retirement of Fixed Assets."

**Table 13**  
**CALCULATION OF DEBT SERVICE COVERAGE**  
**Fiscal Years Ended June 30, 1991 to 1995**

(Unaudited)

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>
TOTAL OPERATING REVENUES	\$121,586,783	\$138,094,311	\$145,666,461	\$160,077,061	\$165,287,939
OPERATING EXPENSES:					
Transmission .....	22,266,347	16,202,921	20,192,251	23,481,764	31,786,946
Treatment and Disposal Plant .....	26,259,741	43,727,966	38,145,441	45,125,696	44,121,508
Special Projects .....	3,289,809	5,730,384	5,682,992	6,663,570	7,981,629
Accounting .....	1,496,597	2,117,041	2,249,741	2,228,585	2,471,755
General and Administrative .....	<u>12,632,923</u>	<u>14,524,143</u>	<u>17,354,870</u>	<u>22,208,293</u>	<u>21,934,052</u>
TOTAL OPERATING EXPENSES .....	<u>65,945,417</u>	<u>82,302,455</u>	<u>83,625,295</u>	<u>99,707,908</u>	<u>108,295,890</u>
TOTAL OPERATING INCOME .....	<u>55,641,366</u>	<u>55,791,856</u>	<u>62,041,166</u>	<u>60,369,153</u>	<u>56,992,049</u>
OTHER INCOME (CHARGES):					
Capital Grant Receipts .....	0	0	0	23,682,613	33,115,894
Operating Transfer In/(Out) .....	(3,144,899)	(409,623)	(500,000)	(1,109,403)	(1,333,208)
Trunk Line Sewer Area Charge .....	156,378	26,177	0	(361,382)	(73,491)
Capacity Charge Municipal System .....	10,657,003	12,385,388	10,920,494	15,136,994	11,439,060
Interest Income .....	18,736,333	18,210,011	11,212,178	11,289,578	16,459,340
Reverse Repurchase Agreement Interest Expense .....	0	(1,000,212)	(538,465)	(740,345)	(2,529,402)
Other Income .....	<u>7,458,773</u>	<u>0</u>	<u>8,500,193</u>	<u>423,229</u>	<u>1,534,499</u>
TOTAL OTHER INCOME	<u>33,863,588</u>	<u>29,211,741</u>	<u>29,594,400</u>	<u>48,321,284</u>	<u>58,612,692</u>
NET REVENUE AVAILABLE FOR DEBT SERVICE	<u>89,504,954</u>	<u>85,003,597</u>	<u>91,635,566</u>	<u>108,690,437</u>	<u>115,604,741</u>
DEBT SERVICE COVERAGE					
Principal and Interest Due in Fiscal Year	2,969,120	2,974,770	2,971,820	9,962,877	16,319,661
Coverage .....	30.15	28.57	30.83	10.91 <sup>(1)</sup>	7.08

(1) Does not equal Exhibit D of the fiscal year 1994 Financial Statements as Capital Grant Receipts were excluded from income in the computation of debt service coverage. It is expected that future Financial Statements will include Capital Grant Receipts as income in the computation of debt service coverage, in accordance with the terms and conditions of the Installment Purchase Agreement.

### **Management's Discussion and Analysis**

**Operating Revenues.** Sewer service charges for domestic customers increased consistently from 1991 to 1995 due primarily to increased rate levels. Commercial and Industrial charges declined in 1991 and 1992 primarily due to water conservation efforts undertaken during California's seven-year drought, which ended in 1993.

The increase in Treatment Plant Service for Others revenue in 1992 to 1995 was due to increased Participating Agency payments for construction related to the Wastewater System Capital Improvement Plan.

**Operating Expenses.** Operating expenses increased from 1993 to 1995 primarily due to increased sludge disposal costs, administrative costs and the imposition of right-of-way charges ("ROW charges") in 1994 and 1995. In each of the last two fiscal years, the City has imposed ROW charges, payable to the General Fund, on the Wastewater System for use by the MWW and the WUD of City streets for sewage lines. The charges are based on the miles of sewer pipes and the number of manhole covers located in City rights-of-way and are considered Wastewater System maintenance and operations charges and are therefore expenses which are payable prior to Parity Obligations, including the Series 1995 Bonds. The City's budgeted charges for the fiscal years ended June 30, 1994 and 1995 were \$3.1 million and \$5.5 million, respectively. In addition, the City has budgeted \$5.53 million in

ROW charges and charges for fire and police protection for Wastewater System assets for the current fiscal year ending June 30, 1996.

While auditing two grants given to the City under the Clean Water Act, a staff member of the SWRCB, acting on behalf of the EPA, verbally raised a question with City staff regarding the propriety of the City's imposition of ROW charges on the Wastewater System. The SWRCB staff member informally indicated that such charges may not comply with the grant guidelines which require revenue programs to result in proportional distribution of charges on a fair and equitable basis. The City Attorney has indicated that, in his view, there are no local prohibitions (State law, City Charter or Municipal Code) against such charges so long as they bear some reasonable relationship to the benefit conferred. No formal action has been taken or initiated by the SWRCB at this time.

For the current fiscal year ending June 30, 1996, for the first time, the City Council approved the imposition upon the Sewer Revenue Fund of a \$2.1 million charge for the purpose of reimbursing other City funds for certain storm drain related expenses. The intended uses of this amount are an educational program concerning the National Pollutant Discharge Elimination System, reimbursing the public liability reserve for related storm drain related claims, and construction of storm drains. This charge had not previously been imposed upon the Wastewater System. No decision has been made as to whether this charge will be treated as an operating expense.

If the ROW or fire and police service charges were to continue to escalate and the City were to continue to impose Storm Drain or other charges, the financing capacity of the Wastewater System could be reduced. In this regard, the City is required to fix rates for the Wastewater System such that charges for wastewater services will be at least equal to pay all outstanding Obligations (other than Parity Obligations) and to provide Net System Revenues equal to 120% of Debt Service for the year. See "SECURITY FOR THE SERIES 1995 BONDS - Rate Covenant."

*Interest Income.* Interest income decreased in 1992 to 1994 due to declining interest rates. Although in 1994 the amount of interest income was about the same as in 1993, it was generally on a much larger cash balance than in 1993 and reflected declining interest rates. Interest income increased in 1995 due to higher yields resulting from longer term investments in addition to larger cash balances in pooled cash.

*Gain (Loss) on Sale/Retirement of Fixed Assets.* In 1994 and 1995, the loss experienced was due to a write-off of the costs of projects that are no longer being pursued because the City had successfully changed from Alternative IVa to the Consumers' Alternative as a result of a U.S. District Court order. See "ACTIONS UNDER CLEAN WATER ACT."

*Interest Expense Revenue Bonds.* Interest Expense increased in 1994 and 1995 because of the issuance of the Series 1993 Bonds.

*Reverse Repurchase - Interest Expense.* Interest expense on reverse repurchase transactions increased in 1995 primarily due to an increase in long term investments resulting in increased reverse repurchase activity.

*Other.* Other non-operating revenues increased in 1993 due to the receipt of one-time insurance proceeds related to the break of the Point Loma Plant Ocean Outfall. The increase in 1995 is due to a reclassification of revenues from Operating Revenues - Miscellaneous.

*Operating Transfer Out.* Operating Transfers In and Out in 1991, which are normally eliminated as intrafund transfers, were not eliminated in error and therefore have resulted in an overstatement. Correct amounts for 1991 for Operating Transfer In and Out were \$129,339 and \$3,274,238, respectively. In 1992 to 1995, \$500,000 was transferred to the Water Operating Fund of the Water Utilities Department to fund the rebate program for water conservation fixtures described in "ACTIONS UNDER THE CLEAN WATER ACT - Litigation and Proposed Consent Decree." The amounts in excess of \$500,000 in 1994 and 1995 were due to transfers to the Authority to replenish the Reserve Fund securing the Series 1993 Bonds due to a market devaluation.

*Capacity Charges.* Capacity Charge revenues declined due to a reduction in the level of construction in the service area.

## **FINANCIAL PROJECTIONS**

Set forth below in Table 14 are the projected estimated cash receipts and operating expenditures for the eight fiscal years ending June 30, 2003. For purposes of complying with the Continuing Disclosure Agreement, the actual results for a year specified in Table 14 will be reflected in Schedule F-1 and F-2 of the City annual financial statements for that year and will be comparable to the financial data contained in Schedules F-1 and F-2 of the financial statements attached as Appendix B. Alternatively, the actual results may be published in tabular form, comparable to Table 14. The City has chosen to analyze prospective rate covenant coverage on the basis of projected cash receipts and operating expenses when paid. Accordingly, the method of calculating Net Revenue for Table 14 differs from the method of calculating Net Revenue Available For Debt Service for Table 13.

**Table 14**  
**FINANCIAL PROJECTIONS**  
(In Thousands of Dollars)  
**Fiscal Years Ending June 30, 1996 to 2003**

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
<b>ESTIMATED REVENUES</b>								
Sewer Service Charge Revenues	\$133,007	\$143,546	\$154,842	\$167,464	\$183,016	\$200,314	\$220,785	\$241,639
New Sewer Service Connections	110	112	113	115	117	119	121	123
Sewage Treatment Plant Services	33,621	39,564	43,273	45,191	55,096	51,339	52,497	54,881
Sludge Handling Charge	357	358	366	374	379	385	392	400
Interest Earnings <sup>(1)</sup>	17,957	19,123	19,544	20,782	21,060	19,827	17,905	16,108
Services Rendered Other Funds	237	249	261	274	288	302	317	333
Capacity Charge Municipal System	15,396	16,166	16,974	17,823	18,714	19,650	20,632	21,664
Sale of Electricity/Gas Engine Generation	350	368	386	405	425	447	469	492
Contributions in Aid	45,134	63,448	42,227	2,699	1,954	1,597	1,354	1,354
Other Revenue	1,424	1,469	1,517	1,567	1,619	1,674	1,732	1,793
Rate Stabilization Fund Transfer	<u>(4,500)</u>	<u>(20,000)</u>	<u>(10,000)</u>	<u>12,000</u>	<u>10,000</u>	<u>8,000</u>	<u>(2,500)</u>	<u>(10,000)</u>
<b>TOTAL ESTIMATED REVENUES</b>	<b>\$243,093</b>	<b>\$264,403</b>	<b>\$269,503</b>	<b>\$268,694</b>	<b>\$292,668</b>	<b>\$303,654</b>	<b>\$313,704</b>	<b>\$328,787</b>
<b>OPERATING EXPENDITURES</b>								
Total Maintenance & Operation	<u>135,474</u>	<u>143,709</u>	<u>159,484</u>	<u>164,435</u>	<u>173,688</u>	<u>183,371</u>	<u>193,375</u>	<u>203,848</u>
<b>NET SYSTEM REVENUE</b>	<b><u>\$107,619</u></b>	<b><u>\$120,694</u></b>	<b><u>\$110,019</u></b>	<b><u>\$104,259</u></b>	<b><u>\$118,980</u></b>	<b><u>\$120,283</u></b>	<b><u>\$120,329</u></b>	<b><u>\$124,939</u></b>
<b>COVERAGE TEST</b>								
Net System Revenue	\$107,619	\$120,694	\$110,019	\$104,259	\$118,980	\$120,283	\$120,329	\$124,939
Annual Debt Service	29,723	51,761	68,736	83,617	93,209	96,259	96,259	96,259
<b>DEBT SERVICE COVERAGE</b>	<b>3.62</b>	<b>2.33</b>	<b>1.60</b>	<b>1.25</b>	<b>1.28</b>	<b>1.25</b>	<b>1.25</b>	<b>1.30</b>

(1) Includes interest on Debt Service Reserve Fund as indicated in the Authority's financial statements, but excludes interest on Construction Fund.

## Projected Operating Results

Table 14 provides the operating revenues of the Wastewater System for the fiscal years ending June 30, 1996 through June 30, 2003.

The following reflects the principal assumptions used in the preparation of these financial projections:

1. The Metropolitan System will continue to be owned and operated by the City and the facilities contained in the Metropolitan Wastewater Plan will be constructed and come into operation as currently planned by the City.
2. The City will continue to maintain a 45-day operating reserve.
3. Maintenance and operations expenditures (in thousands) for the fiscal years ending June 30, 1996 through June 30, 2003 will be as follows:

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
Municipal System . . . . .	\$ 44,111	\$ 44,807	\$ 47,048	\$ 49,400	\$ 51,870	\$ 54,464	\$ 57,186	\$ 60,046
Metropolitan System . . . . .	<u>91,363</u>	<u>98,902</u>	<u>112,436</u>	<u>115,035</u>	<u>121,818</u>	<u>128,907</u>	<u>136,189</u>	<u>143,802</u>
TOTAL . . . . .	\$135,474	\$143,709	\$159,484	\$164,435	\$173,688	\$183,371	\$193,375	\$203,848

Inflation rates were applied to maintenance and operations estimates as follows: 4.0% for the fiscal year ending June 30, 1997 and 5.0% per year for each fiscal year thereafter. (The comparable percentage for the Municipal System appearing in the Prior Official Statement was 6%.) Total maintenance and operations costs for this eight-year period are approximately \$79 million more than in the Prior Official Statement. Principally, these increases are the result of increased staffing estimates to operate new facilities, including the South Bay facilities, and provide increased administration, safety and training functions, and the imposition by the City Council of both increased ROW charges for the fiscal years ending June 30, 2003 and partial funding of the Storm Drain budget from the Sewer Revenue Fund for the fiscal year ending June 30, 1996.

4. For the fiscal years ending June 30, 1996 through June 30, 2003, growth projections of single family residential accounts are based upon growth projections of population prepared by the San Diego Association of Governments. Sewer service charges are assumed to increase by 0% in the fiscal year ending June 30, 1996, by 6.0% in fiscal years ending June 30, 1997 through 1999 and by 8.0% in fiscal years ending June 30, 2000 through 2003. No increases in capacity charge rates are assumed. New system hook-ups (measured in EDU's) are projected based on the average of the last five years, increased at 5.0% per year. These projections are summarized below:

*For the Fiscal Year Ending June 30,  
Projected*

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
Single-Family Monthly Service Charge (Average)	\$22.91	\$24.28	\$25.74	\$27.28	\$29.46	\$31.82	\$34.37	\$37.12
Single-Family Residential Accounts	200,246	203,320	206,394	209,468	212,542	215,916	219,590	223,263
Total Service Charge Revenues (000)	\$133,007	\$143,546	\$154,842	\$167,464	\$183,016	\$200,314	\$220,785	\$241,639
Capacity Charge (Per EDU)	\$6,998	\$6,998	\$6,998	\$6,998	\$6,998	\$6,998	\$6,998	\$6,998
Annual Increase in EDU's	2,200	2,310	2,426	2,547	2,674	2,808	2,948	3,096
Total Capacity Charge Revenue (000)	\$15,396	\$16,166	\$16,974	\$17,823	\$18,714	\$19,650	\$20,632	\$21,664

5. The City will fund the capital costs of the Wastewater System Capital Improvement Plan as provided in the financial plan from a combination of proceeds of indebtedness and Wastewater System revenues as set forth in Table 5.

6. The average annual interest rate on indebtedness issued to finance the Wastewater System Capital Improvement Plan will be 6.5% for fiscal year ending June 30, 1996 and 7.0% thereafter, and such debt will be amortized over 30 years from time of issuance. This is lower than the 7.5% average annual interest rate specified in the Prior Official Statement and is based upon a reevaluation of expected long-term interest costs.

7. The amount of indebtedness (in thousands) that will be issued in each of the fiscal years ending June 30, 1996 through June 30, 2003 to fund the Wastewater System Capital Improvement Program will be as follows:

<u>Fiscal Year Ending June 30,</u>	<u>Principal Amount</u>
1996	\$350,000
1997	\$214,365
1998	\$206,926
1999	\$162,380
2000	\$ 75,689
2001	0
2002	0
2003	0

Including the issuance of the Outstanding Parity Bonds in 1993, the total amount of indebtedness described above is approximately \$1.260 billion (including approximately \$150 million of debt related to the Municipal System). This amount compares with approximately \$1.045 billion of total indebtedness (and no debt related to the Municipal System) assumed in the Prior Official Statement.

8. The average annual interest rate on invested funds will be 5.0%. This interest rate assumption is lower than the assumption appearing in the Prior Official Statement and is based upon currently available yields.



9. The Participating Agencies will contribute up to 31.5 % of the total Metropolitan System effluent flow and will pay maintenance and operations expenses together with capital costs associated with the repair, replacement and betterment of the existing Metropolitan System based upon their proportionate discharge of wastewater. The Participating Agencies will pay their proportionate share of the costs of the Metropolitan System Capital Improvement Program including the capital costs associated with the expansion of the Point Loma Plant up to 234 mgd but excluding the costs of any further expansion beyond 234 mgd and any water reclamation projects. The costs associated with reclamation and Metropolitan System expansion beyond 234 mgd projects are estimated to be \$128 million.

10. Annual flows of the City for fiscal years ending June 30, 1996 through June 30, 2003 will be as follows:

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
Annual Flows - mgd	129.70	132.70	135	138	140	141	144	146
Percent (%) Increase	4.01	2.31	1.73	2.22	1.45	0.71	2.13	1.39

The projected increases in annual flows which appeared in the Prior Official Statement are different in a number of respects from those contained in this table. Those projected for the fiscal years ending June 30, 1996, 1997, 1998 and 2001 are lower than the prior ones because unit per capita generation rates have declined due to the economic recession and successful water conservation measures taken in response to the prolonged drought. The other projected years of annual increases in the Prior Official Statement are lower than those set forth above because of (i) revised increases in population estimates based on the current forecasts, and (ii) slight increases in unit per capita generation rates resulting from continued economic recovery and increase in per capita water consumption.

## LABOR RELATIONS

Approximately 98 % of the MWWD employees and the WUD employees funded from Sewer Revenue Fund revenues are represented by either the Municipal Employees Association ("MEA") or the American Federation of State and County Municipal Employees ("Local 127"). In general, the MEA represents all technical, professional, and supervisory staff and administrative support personnel. Local 127 represents maintenance workers, laborers, skilled trades positions and equipment operators.

MEA represented employees and the Local 127 represented employees received a 1 % increase effective June 3, 1995. Under the current agreement, both the MEA and Local 127 represented employees will receive 3 % increases effective January 1, 1996 and January 1, 1997.

## PENSION PLAN

All the MWWD and the WUD employees along with all other City employees and employees of the San Diego Unified Port District, participate in the City Employees' Retirement System ("CERS"). As a multiple-employer public employee retirement system, CERS acts as a common investment and administrative agent for both the City and the San Diego Unified Port District. CERS provides retirement benefits to all of its members through a variety of benefit plans.

The CERS plans are structured as defined benefit plans in which benefits are based on salary, length of service and age. The MWWD and the WUD employees and other City employees are required to contribute a percentage of their annual salary to CERS. State legislation requires the City to contribute to CERS at rates determined by actuarial valuations.

As of the last annual valuation dated June 30, 1994, the unfunded accrued actuarial liability for CERS was \$154.1 million, and the funded portion was \$1,184.1 million, or 88.5%.

## INSURANCE

Both the MWWD and the WUD are self insured for workers' compensation and long-term disability. The MWWD and the WUD are self insured for public liability claims exposure up to \$3 million per occurrence. For liability between \$3 million and \$25 million, the MWWD and the WUD are covered by the City which purchases insurance from commercial insurers in layers for its public liability exposure.

Table 15 reflects the annual budget and expenditures for liability claims of the Wastewater System for fiscal years 1991 through 1996 follow:

**Table 15**  
**LIABILITY CLAIMS BUDGET AND EXPENDITURES**  
**Fiscal Years Ending June 30, 1991 to 1996**

(Unaudited)

<u>Fiscal Year</u>	<u>Budget</u>	<u>Expenditure</u>
1991	\$1,114,000	\$1,393,000
1992	\$1,114,000	\$2,516,000
1993	\$1,464,000	\$1,660,000
1994	\$1,464,000	\$1,710,000
1995	\$1,464,000	\$1,458,000
1996	\$1,464,000	--

As of July 1, 1995, Sewer Revenue Fund liability reserve totaled \$602,375.

The City maintains commercial property insurance on all City owned buildings of an insurable nature, and currently carries property and extended loss insurance coverage of \$200 million per occurrence with a \$25,000 deductible on all City buildings, with earthquake insurance coverage of up to \$100 million on all bond-funded buildings. Depending on availability and affordability of such earthquake insurance, the City may elect not to purchase such coverage in the future. The City does not maintain any casualty insurance on the pipelines of the Wastewater System as such insurance is not commercially available.

Insurance for the projects contemplated by the Wastewater System Capital Improvement Plan is provided by the City through an Owner Controlled Insurance Program through a single private insurance company which provides liability insurance coverage in the amount of \$100 million. The Owner Controlled Insurance Program provides general liability, workers' compensation and builder's risk property insurance for all contractors working on the MWWD's construction sites.

## INVESTMENT OF FUNDS

In accordance with the City Charter, the Treasurer of the City is responsible for investing the unexpended cash in the Treasurer's pooled operating investment fund (the "Pool"). Responsibility for the daily investment of funds in the Pool is delegated to the Investment Officer. The City is the only participant in the Pool; there are no other Pool participants either voluntary or involuntary. The investment objectives of the Pool are preservation of capital, liquidity and return.

## ***Oversight and Reporting Requirements***

The City Treasurer provides an investment report on a monthly basis to the City Manager, the City Auditor/Comptroller, and the City Council and annually presents a statement of investment policy (the "Investment Policies") to the City Manager, the City Council and the City Manager's Investment Advisory Committee. The Investment Advisory Committee was established in March 1990 and is comprised of the City Auditor/Comptroller, Financial Management Director and one investment professional from the private sector. The Committee is charged with oversight responsibility to review on an on-going basis the Investment Policies and practices of the City Treasurer and recommend changes. Investments in the Pool are audited by an independent firm of certified public accountants as part of the overall audit of the City's financial statements.

The City's investment section utilizes outside services to obtain investment portfolio valuations and accounting and reporting services. The service provides monthly portfolio valuation, investment performance statistics, and other statistical security reports which are distributed to the City Treasurer accounting section and the City Auditor/Comptroller's office for review and reconciliation. The City Treasurer accounting section prepares a series of monthly reports, which includes portfolio market valuation, and distributes these to the Mayor, City Council, City Manager and other officials.

## ***Authorized Investments***

Investments in the Pool are governed by state law as well as the Treasurer's Investment Policies. Included among the Treasurer's Investment Policies is the power to write call options and put options on U.S. Treasury and U.S. Agency securities; also included is the power to purchase such call options and put options. A call option written by the Pool gives to a third party the right to purchase securities from the Pool at a specific price and a put option written by the Pool gives the right to a third party to tender securities for sale to the Pool at a specific price. Call options and put options which are purchased give the Pool the respective rights to acquire securities from, and sell securities to, a third party at a specific price. The Treasurer has adopted an internal guideline to the effect that the Pool will not write call options for securities which are not owned by the Pool. The maximum financial exposure for call options (the prices of the securities covered by call options) is \$40 million for calls being written by the Pool and \$40 million for calls being purchased by the Pool. The maximum exposure permitted for puts being written or purchased by the Pool is \$20 million for each.

In addition, the Treasurer's Policies permit the Pool to engage in reverse repurchase transactions. These entail the sale of securities by the Pool at a specific price and the concurrent agreement to purchase the same back at a later date at a specific price. The Pool invests proceeds from the sale in other securities with maturities not later than the date on which the original securities must be repurchased. For this purpose, the Treasurer treats securities with variable interest rates as having maturities equal to the time between interest reset dates. Under the Treasurer's internal guidelines, the Pool's aggregate maximum exposure to reverse repurchase securities under repurchase agreements may not exceed 30% of the book value of the Pool (without offset for reverse repurchase agreement liabilities) measured at the time of entering into a reverse repurchase transaction. Effective January 1, 1996, California law will be changed to limit the cumulative amount of reverse repurchase transactions to 20% of cash amounts in the Pool, exclusive of amounts received in reverse repurchase transactions. The City Treasurer will revise the Investment Policy to reflect these recent changes in State law prior to the effective date of such changes.

The Pool does not engage in securities lending transactions.

## ***Pool Liquidity and Other Characteristics***

The Pool is highly liquid. As of June 30, 1995, approximately 11.6% of the Pool investments matured within 60 days, 16.2% within 90 days and 34.3% within 180 days. As of June 30, 1995, the Pool had a weighted average maturity of 1.37 years (500 days), duration of 1.1 years and its weighted yield was 5.70%. (For purposes of calculating weighted average maturity, the Treasurer treats investments in the State-wide Local Agency Investment Fund as maturing within one day. Duration is a measure of the price volatility of the portfolio which reflects an estimate of the projected increase or decrease in the value of the portfolio based upon a decrease or

increase in interest rates. A duration of 1.1 years means that for every 1% increase in market rate, the market value of the portfolio would decrease by approximately 1.1%). The Pool composition is intended to provide sufficient liquidity to meet disbursement requirements. The composition and value of investments in the Pool will vary from time to time depending on the cash flow needs of the City and changes in interest rates.

**Table 16**  
**SUMMARY OF ASSETS IN THE**  
**CITY OF SAN DIEGO POOLED INVESTMENT FUND**  
(In Millions of Dollars)  
*Fiscal Year Ended June 30, 1995<sup>(1)</sup>*

(Unaudited)

	<u>Book Value</u>	<u>Market Value</u>	<u>Percent of Total</u>
U.S. Treasury Bills and Notes	\$673.3	\$677.5	66.1%
Federal Agency Securities	121.4	120.4	11.9
Medium Term Notes (Corporate) <sup>(2)</sup>	61.7	61.7	6.1
Money Market Instruments <sup>(3)</sup>	148.0	148.4	14.5
Local Agency Investment Fund	<u>14.9</u>	<u>14.9</u>	<u>1.4</u>
Total Assets <sup>(4)</sup>	\$1,019.3	\$1,022.9	100.0%
Less: Reverse Repurchase Agreement Liabilities <sup>(5)</sup>	(101.1)	(101.1)	
Net Assets	<u>\$ 918.2</u>	<u>\$ 921.8</u>	

(1) Based on Book Value.

(2) Interest rates are reset at intervals ranging from one day to three months.

(3) Commercial paper, negotiable certificates of deposit, term and overnight repurchase agreements, banker's acceptances, bank notes and thrift notes.

(4) Reflects the investment of proceeds received by the Pool upon the sale of securities in reverse repurchase transactions.

(5) The aggregate amount payable by the Pool upon the repurchase of securities sold by the Pool in reverse repurchase transactions.

### ***Derivatives***

As of June 30, 1995, the City's Investment Pool had less than 5% of its assets invested in structured notes or derivatives. The Treasurer defines a derivative as a financial instrument whose value is derived from an underlying asset, price, index or rate, e.g. options, futures or interest rate swaps. A structured note is an investment instrument which can contain within its structure various combinations of derivatives such as imbedded calls and interest rate swaps that will offer returns to an investor within a defined set of parameters and interest rate scenarios, e.g. step-ups, multiple-indexed notes, inverse floaters, or leveraged constant maturity notes. The Treasurer does not define fixed rate notes or debentures with call features or single index non-leveraged floating rate notes, e.g. monthly libor plus or minus a spread, as structured notes. The Treasurer limits structured notes eligible for purchase to those investments, which at the time of purchase, have no risk of principal loss if held to maturity and offer an estimated return at purchase sufficiently in excess of a comparable rate of return on a fixed term investment in the judgment of the Investment Officer. The Treasurer does not permit the purchase of securities that have a negative amortization of principal. In addition, recently enacted California law prohibits the purchase of inverse floaters, range notes or interest only strips that are derived from pools of mortgages.

## **POSSIBLE TRANSFER OF OWNERSHIP OF METROPOLITAN SYSTEM**

### ***The San Diego Wastewater Management District***

The California legislature has created the San Diego Wastewater Management District (the "District") to provide wastewater treatment services on a regional basis. The legislation creating the District was an outgrowth of a consensus developed by representatives of the City, the Participating Agencies and others to provide a regional approach to wastewater treatment. Initially, the District consisted of 13 member agencies, including the City. However, as a consequence of unresolved issues relating to cost sharing and governance among the member

agencies, the City and the cities of Chula Vista and La Mesa have recently withdrawn from the District. However, nothing prevents any or all of the withdrawing agencies from rejoining the District.

One of the purposes of the District is to assume ownership and operation of the Metropolitan System. Under the Installment Purchase Agreement, the City has retained the right to transfer ownership of the Metropolitan System to the District upon the assumption by the District of the City's obligations with respect to the Metropolitan System, including its obligation to make Installment Payments relating to components of its Metropolitan System. The City has made no determinations with respect to whether it will return to the District as a member or whether it will transfer ownership of the Metropolitan System to the District.

#### *Installment Purchase Agreement Conditions For Transfer of Metropolitan System*

Under the Installment Purchase Agreement, the City has retained the right to transfer ownership of the Metropolitan System, including amounts in the Sewer Revenue Fund attributable to the Metropolitan System, to the District or any other governmental agency whose primary purpose is to provide wastewater treatment and disposal service, provided such entity agrees to assume all Obligations the proceeds of which were used to acquire components which are part of the Metropolitan System and all other obligations relating to the Metropolitan System which are payable from Metropolitan System Revenues, Net Metropolitan System Revenues, System Revenues or Net System Revenues, including but not limited to salaries and benefits payable to employees who are to become employees of such entity, all accounts payable, Qualified Swap Agreements, Credit Provider Reimbursement Obligations and all other obligations with respect thereto such as capital improvement expenditure obligations and tort claims, and the obligation to pay fines, penalties or damages arising out of or relating to violations of federal, state or local laws or regulations which are applicable or purported to be applicable to the operation of the Metropolitan System and provided that the conditions described in "APPENDIX E - SUMMARY OF PRINCIPAL LEGAL DOCUMENTS - The Installment Purchase Agreement - Selected Covenants of the City - Transfer of Metropolitan System Components" are met. Among other conditions, the Installment Purchase Agreement requires a rating confirmation and a bond counsel opinion before the City may transfer the Metropolitan System.

Upon any such transfer of the Metropolitan System, the City shall be relieved and discharged from any and all obligations payable from Net Metropolitan System Revenues, including the Installment Payments relating to the Series 1995 Bonds and the Outstanding Parity Bonds. Upon any such transfer of the Metropolitan System, the Wastewater System shall mean the Municipal System with respect to the City and the Metropolitan System with respect to such transferee.

### **TAX MATTERS**

In the opinion of Orrick, Herrington & Sutcliffe and Lofton, De Lancie & Nelson, Co-Bond Counsel, based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, compliance with certain covenants, interest on the Series 1995 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the "Code") and is exempt from State of California personal income taxes. Co-Bond Counsel are further of the opinion that interest on the Series 1995 Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, although Co-Bond Counsel observe that such interest is included in adjusted current earnings in calculating federal corporate alternative minimum taxable income. A complete copy of the proposed form of opinion of Co-Bond Counsel is set forth in Appendix F hereto.

The difference (if any) between the issue price of any maturity of the Series 1995 Bonds and the amount to be paid at maturity of such Series 1995 Bonds (excluding amounts stated to be interest and payable at least annually over the term of such Series 1995 Bonds) constitutes "original issue discount," the accrual of which, to the extent properly allocable to each owner thereof, is treated as interest on the Series 1995 Bonds which is excluded from gross income for federal income tax purposes and State of California personal income taxes. For this purpose, the issue price of a particular maturity of the Series 1995 Bonds is the first price at which a substantial amount of such maturity of the Series 1995 Bonds is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue

discount with respect to any maturity of the Series 1995 Bonds accrues daily over the term to maturity of such Series 1995 Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such Series 1995 Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity) of such Series 1995 Bonds. Owners of the Series 1995 Bonds should consult their own tax advisors with respect to the tax consequences of ownership of Series 1995 Bonds with original issue discount, including the treatment of purchasers who do not purchase such Series 1995 Bonds in the original offering to the public at the first price at which a substantial amount of such Series 1995 Bonds is sold to the public.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the Series 1995 Bonds. The City and the Authority have covenanted to comply with certain restrictions designed to insure that interest on the Series 1995 Bonds will not be included in federal gross income. Failure to comply with these covenants may result in interest on the Series 1995 Bonds being included in gross income for federal income tax purposes, possibly from the date of issuance of the Series 1995 Bonds. The opinion of Co-Bond Counsel assumes compliance with these covenants. Co-Bond Counsel have not undertaken to determine (or to inform any person) whether any actions taken (or not taken) or events occurring (or not occurring) after the date of issuance of the Series 1995 Bonds may adversely affect the value of, or the tax status of interest on, the Series 1995 Bonds. Further, no assurance can be given that pending or future legislation or amendments to the Code, if enacted into law, or any proposed legislation or amendments to the Code will not adversely affect the value of, or the tax status of interest on, the Series 1995 Bonds. Prospective Series 1995 Bondholders are urged to consult their own tax advisors with respect to proposals to restructure the federal income tax.

Certain requirements and procedures contained or referred to in the Indenture, the Installment Purchase Agreement, the Tax Certificate and other relevant documents may be changed and certain actions (including, without limitation, defeasance of the Series 1995 Bonds) may be taken or omitted under the circumstances and subject to the terms and conditions set forth in such documents. Co-Bond Counsel express no opinion as to any Series 1995 Bond or the interest thereon if any such change occurs or action is taken upon the advice or approval of bond counsel other than Orrick, Herrington & Sutcliffe and Lofton, De Lancie & Nelson.

Although Co-Bond Counsel is of the opinion that interest on the Series 1995 Bonds is excluded from gross income for federal income tax purposes and is exempt from State of California personal income taxes, the ownership or disposition of, or the accrual or receipt of interest on, the Series 1995 Bonds may affect an owner's federal or state tax liability. The nature and extent of these other tax consequences will depend upon the particular tax status of the Bondholder or the Bondholder's other items of income or deduction. Co-Bond Counsel express no opinion regarding any such other tax consequences.

## **INDEPENDENT ACCOUNTANTS**

The financial statements of the Sewer Revenue Fund for the fiscal years ended June 30, 1994 and 1993, attached hereto as Appendix B to this Official Statement have been audited by Calderon, Jaham & Osborn, independent accountants, as set forth in their report, dated November 10, 1994.

## **CONSULTING ENGINEER**

High-Point Rendel (the "Consulting Engineer") has prepared a report dated October 10, 1995, attached hereto as Appendix A (the "Engineer's Statement of Feasibility"). The Engineer's Statement of Feasibility should be read in its entirety for an understanding of the Consulting Engineer's conclusions concerning the Wastewater System. According to the City, the administrative waiver described under the heading "ACTIONS UNDER THE CLEAN WATER ACT - Relief From Secondary Treatment Reimbursements" does not in any way modify the assumptions contained in the Engineer's Statement of Feasibility. Therefore, the Consulting Engineer does not believe that it is necessary to modify in any way the Consulting Engineer's conclusions in the Engineer's Statement of Feasibility.

## **RATINGS**

Moody's Investors Service and Standard & Poor's Ratings Group have assigned ratings of "Aaa" and "AAA," respectively, to the Series 1995 Bonds based upon the issuance of the Policy by Financial Guaranty. See "SECURITY FOR THE SERIES 1995 BONDS - Bond Insurance." Such ratings reflect only the views of such organizations and any desired explanation of the significance of such ratings should be obtained from the rating agency furnishing the same, at the following addresses: Moody's Investors Service, Inc., 99 Church Street, New York, New York 10007; and Standard & Poor's Ratings Group, 25 Broadway, New York, New York 10004. Such ratings are not a recommendation to buy, sell or hold the Series 1995 Bonds. Generally, a rating agency bases its rating on the information and materials furnished to it and on investigations, studies and assumptions of its own. There is no assurance that such ratings will continue for any given period of time or that such ratings will not be revised downward or withdrawn entirely by the rating agencies, if in the judgment of such rating agencies, circumstances warrant. Any such downward revision or withdrawal of such ratings may have an adverse effect on the market price or marketability of the Series 1995 Bonds. The Authority and the City assume no responsibility either to notify the owners of any proposed change in or withdrawal of any such rating subsequent to the date hereof, or to contest any such revision or withdrawal.

## **FINANCIAL ADVISORS**

Public Resources Advisory Group, Los Angeles, California and Whitfield, Inc., Poulsbo, Washington have acted as financial advisors to the City in connection with the issuance of the Series 1995 Bonds. The Financial Advisors are not obligated to undertake, and have not undertaken to make, an independent verification or assume responsibility for the accuracy, completeness, or fairness of the information contained in this Official Statement.

## **CERTAIN LEGAL MATTERS**

Legal matters incident to the authorization and issuance of the Series 1995 Bonds are subject to the approval of Orrick, Herrington & Sutcliffe, Los Angeles, California and Lofton, De Lancie & Nelson, San Francisco, California, Co-Bond Counsel. The form of opinion Co-Bond Counsel propose to render is attached as Appendix F. Co-Bond Counsel undertake no responsibility for the accuracy, completeness or fairness of this Official Statement. Certain legal matters are subject to the approval of John W. Witt Esq., the City Attorney of the City of San Diego and General Counsel to the Authority and Orrick, Herrington & Sutcliffe, Los Angeles, California, Disclosure Counsel.

## **LITIGATION**

There is no litigation pending concerning the validity of the Series 1995 Bonds, the corporate existence of the City or the Authority, or the title of the officers to their respective offices.

## **UNDERWRITING**

The Series 1995 Bonds are to be purchased by Morgan Stanley & Co. Incorporated, EVEREN Securities, Inc., Rauscher Pierce Refsnes, Inc., Charles A. Bell Securities Corp., Renge Securities & Co., Inc. and Muriel Siebert & Co., Inc. as Underwriters, at a price which includes an underwriters' discount of \$2,264,522.97. The Underwriters are committed to purchase all the Series 1995 Bonds if any are purchased. The Underwriters may offer and sell the Series 1995 Bonds to certain dealers (including depositing the Series 1995 Bonds into investment trusts) and others at prices lower than the offering prices stated on the inside cover of this Official Statement. After the initial public offering, the public offering prices of the Series 1995 Bonds may be changed from time to time by the Underwriters.

## CONTINUING DISCLOSURE

The Authority has determined that no financial or operating data concerning the Authority is material to an evaluation of the offering of the Series 1995 Bonds or to any decision to purchase, hold or sell the Series 1995 Bonds and the Authority will not provide any such information. The City has undertaken all responsibilities for any continuing disclosure to Bondholders as described below, and the Authority shall have no liability to the Bondholders of the Series 1995 Bonds or any other person with respect to S.E.C. Rule 15c2-12.

The City has covenanted for the benefit of Bondholders and beneficial owners of the Series 1995 Bonds to provide certain financial information and operating data relating to the City by not later than 270 days following the end of the City's fiscal year (which fiscal year currently ends June 30) (the "Annual Report"), commencing with the report for the 1995-96 fiscal year, and to provide notices of the occurrence of certain enumerated events, if material. The Annual Report will be filed by the Trustee on behalf of the City with each Nationally Recognized Municipal Securities Information Repository and the State Repository, if any. The notices of material events will be filed by the Trustee on behalf of the City with each Nationally Recognized Municipal Securities Information Repository and the State Repository, if any. The specific nature of the information to be contained in the Annual Report or the notices of material events is summarized below under the caption "APPENDIX E - SUMMARY OF PRINCIPAL LEGAL DOCUMENTS - Continuing Disclosure Agreement." These covenants have been made in order to assist the Underwriters in complying with S.E.C. Rule 15c2-12(b)(5).

## AVAILABILITY OF DOCUMENTS

Copies of the Official Statement, the Indenture, the Installment Purchase Agreement, the Continuing Disclosure Agreement, the City Charter, the Sewer Revenue Fund audited financial statements and additional information relating to the Series 1995 Bonds will be available, upon written request, from the office of the City Clerk, City Administration Building, 202 C Street, MS 2A, San Diego, California 92101. Additional copies of the Official Statement will be made available upon request from the Financial Advisors, c/o Public Resources Advisory Group, 40 Rector Street, New York, New York 10006, (212) 566-7800.

## MISCELLANEOUS

The purpose of this Official Statement is to supply information to prospective buyers of the Series 1995 Bonds. References are made herein to certain documents and reports that are brief summaries thereof that do not purport to be complete or definitive, and reference is made to such documents and reports for full and complete statement of the contents thereof.

Any statements in this Official Statement involving matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact. This Official Statement is not to be construed as a contract or agreement between the City and the purchasers or holders of any of the Series 1995 Bonds. The preparation and distribution of this Official Statement have been authorized by the Authority.

PUBLIC FACILITIES FINANCING AUTHORITY  
OF THE CITY OF SAN DIEGO

By: /s/ Jack McGrory  
Chairman



## **APPENDIX A**

### **ENGINEER'S STATEMENT OF FEASIBILITY FROM HIGH-POINT RENDEL**

**San Diego, California**

The Engineer's Statement of Feasibility was prepared prior to the receipt by the City of the administrative waiver described under the heading "ACTIONS UNDER THE CLEAN WATER ACT - Relief From Secondary Treatment Requirements." However, since the City is still subject to compliance with the interim order described under the heading "ACTIONS UNDER THE CLEAN WATER ACT - Litigation and Proposed Consent Decree," which compliance forms the basis for the assumptions contained in the Engineer's Statement of Feasibility, no changes in the assumptions were deemed necessary as a consequence of the City's obtaining of the administrative waiver.

# High-Point Rendel

## Engineer's Statement of Feasibility

October 10, 1995

SAN DIEGO WASTEWATER PROGRAM

# SAN DIEGO WASTEWATER PROGRAM

## ENGINEER'S STATEMENT OF FEASIBILITY

October 10, 1995

Prepared by High-Point Rendel

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**SAN DIEGO WASTEWATER PROGRAM**  
**ENGINEER'S STATEMENT OF FEASIBILITY**  
October 10, 1995

Prepared by High-Point Rendel

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I. EXECUTIVE SUMMARY

I. EXECUTIVE SUMMARY

The City of San Diego (the "City") engaged High-Point Rendel to conduct an independent analysis of the City's Metropolitan Wastewater Plan and Capital Improvement Program (the "Program" or "CIP"). The analysis assessed the City's ability to fund the Program, meet its timetable, coordinate and meet interim court-ordered milestones, provide reasonably accurate and detailed cost estimates, and maintain and adequately fund operations and maintenance staff. High-Point Rendel's Team also conducted an independent evaluation of the adequacy of the City's Financing Plan in connection with the proposed issuance of Sewer Revenue Bonds, Series 1995, by the Public Facilities Financing Authority of the City of San Diego<sup>1</sup>, and evaluated the program's progress, planned versus actual, for the previous two years.

This Engineer's Statement of Feasibility (the "Report") contains our findings and presents an independent opinion of the feasibility of the City's wastewater program with respect to six distinct areas of investigation. Completing the Report required assembling a team of professionals qualified in each of the six areas evaluated. High-Point Rendel, in association with Damon S. Williams Associates, and Lenax Construction Services, Inc. (the "Team") prepared this Report. The six areas of investigation are: Organization and Management Structure, Engineering, Scheduling, Cost Estimation, Operations and Maintenance, and the Financing Plan. Following is a brief description of each area of investigation.

- A. Organization and Management Structure - Analyzed the organizational structure of the Metropolitan Wastewater Department (the "MWWD"), formerly known as the Clean Water Program, and its ability to effectively implement the Program within the City's timetable and in compliance with the Imposed Milestones.<sup>2</sup>
- B. Engineering - Evaluated the City's ability to implement, complete, and maintain system integrity and achieve customer satisfaction during design and construction of the Capital Improvement Program.
- C. Scheduling - Assessed the MWWD's scheduling methodology and the feasibility of achieving the Program's schedule.
- D. Cost Estimation - Provided an opinion of the reasonableness and accuracy of the City's cost estimating techniques and procedures.

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1. For purposes of this Report, the term "City" shall mean the City of San Diego and/or the Public Facilities Financing Authority of the City of San Diego.

2. Imposed Milestones are deadlines that the courts or other outside agencies have set for the City. Please refer to Section II. B for a detailed discussion of Imposed Milestone dates.

I. EXECUTIVE SUMMARY

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- E. Operations and Maintenance - Reviewed the adequacy of the operations and maintenance ("O&M") programs including present staffing, planned staffing, associated cost to sufficiently maintain the programs and O&M cost estimating.
- F. Financing Plan - Evaluated the adequacy and reasonableness of the Financing Plan and Revenue Program to provide sufficient forecasted revenues to meet projected O&M expenses, annual debt service requirements, coverage requirements, capital expenditures and other funding requirements. The Team also evaluated the rates and fees in comparison with other municipalities.

Primary Assumptions

The primary assumptions underlying the Team's opinions regarding the feasibility of the City's wastewater program are:

- The period of evaluation is FY 1996 to FY 2003, inclusive;
- The Metropolitan Wastewater Plan will be implemented as presented;
- The City will continue to own, operate, and maintain all facilities;
- The City and the other Participating Agencies will perform their contractual obligations during the evaluation period;<sup>3</sup>
- The Point Loma Wastewater Treatment Plant will continue to operate at advanced primary treatment;
- The City will set rates and charges sufficient to meet the rate covenant under the Bond Documents;
- The City will continue to be entitled to collect revenues from its current user base;
- Throughout the planning period the annual rate of inflation is assumed to be five percent;
- O&M costs will increase at an average annual rate of five percent per year through the evaluation period; and

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3. Presently, certain costs being billed to the Participating Agencies are being contested. None of these costs are included in the Financing Plan revenues. The agreements expire on June 30 or August 31, 2003, with the Participating Agencies having the option to extend the agreements for an additional 10 years.

I. EXECUTIVE SUMMARY

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- The City will have the ability to access the capital markets to borrow funds for the Metropolitan Wastewater Plan over the evaluation period at an average interest rate of 6.5 percent in FY 1996 and 7.0 percent thereafter.

General

The primary goal and objectives of the City's wastewater program are to plan, design, construct and operate an adequate wastewater system for the Greater San Diego area. This program is known as the Metropolitan Wastewater Plan.

The Metropolitan Wastewater Plan's projects, managed by the MWWD, are the primary subjects of this evaluation. The Team received in-depth presentations of elements of the Metropolitan Wastewater Plan from department and division heads of the City, the Program Manager and the Construction Manager, and was provided with documents pertinent to the evaluation. The findings of the Team are summarized below.

Opinion

Based on the Team's evaluation, it is the opinion of the Team that the Program is feasible, can be funded within the City's timetable, and that the City's Program is reasonable and adequate with respect to the following areas:

- Organization and Management Structure - The organization and management structure in place is adequate to continue the implementation of the Program.
- Engineering - The City has the ability to plan, design and construct the proposed capital improvements to the Wastewater System.
- Scheduling - The Metropolitan Wastewater Plan is achievable within the time constraints established for the program and by the Imposed Milestone dates.
- Cost Estimation - The City's cost estimating techniques are appropriate for the Program, the estimates prepared are reasonable, and the policies and procedures for cost estimation and control are adequate.
- Operation & Maintenance - The O&M programs in place are adequate, and the planned system staff and estimated costs of O&M are reasonable.
- Financing Plan - The City's revenue assumptions and resulting projected revenues in the Financing Plan are reasonable. The Team has also concluded that the projected revenues, debt issues and other sources of funds are adequate to fund projected O&M expenses, annual debt service requirements, coverage requirements, administrative expenses, payments to reserve funds and capital expenditures. The Financing Plan is feasible based on current expected conditions during the projection period.

## I. EXECUTIVE SUMMARY

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Summaries of the results of the Team's evaluation of each of the areas follow. Please refer to the various sub-sections of this Report for a comprehensive discussion of the Team's evaluation.

### Organization and Management Structure

The success of the MWWD will depend to a certain extent on its staffing, organization and management. The Team reviewed the current and projected organization and management structure of the MWWD to determine if it will be sufficient to fulfill the Program's main objectives; to design, bid and construct the proposed Program facilities. The flexibility of the organizational plan was considered, specifically in relation to the changes which may occur during implementation of the Program.

The current organizational structure of the MWWD is adequate for the tasks of design, bid and construction of the Program facilities. The Team's evaluation of the current MWWD management and organization included an examination of the skills, practices and professionalism of the City's staff and consultants. Based on this assessment, the Team expects that future program management will be adequate.

### Engineering

The principal evaluation of the engineering elements of the program involved a detailed examination of Project Reports and the Program. The Project Reports and Metropolitan Wastewater Plan were reviewed to gain an understanding of the elements of the CIP, the progress made, its soundness, its completeness, its ability to be implemented in an effective and efficient manner, and its ability to meet the long-term objectives of the Wastewater System, including: the maintenance of system integrity, customer satisfaction, and acceptability to both users and regulators.

The City is proceeding with its plan to implement the Metropolitan Wastewater Plan. The majority of design packages have been completed and approximately 18% of the estimated construction value is in place.

The Team concludes that the City has selected competent design firms to handle the complex engineering design associated with the Program. The Program Management Division is working cohesively to react and mitigate the impact of any design slippages or enhanced re-design packages. The tracking system in place is adequate to manage these processes.

### Scheduling

The MWWD has established and adheres to sound scheduling policies and procedures. These policies and procedures are technically sophisticated and are comparable with other scheduling techniques used on projects of similar size and magnitude.

The progress of the Program to date has been carefully monitored and revised as required. It is the Team's opinion that the scheduling efforts are appropriate.



I. EXECUTIVE SUMMARY

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The scheduling guidelines and specifications stated in the various contract documents are sufficiently detailed and sophisticated to allow proper monitoring of the progress of the work. It is the Team's opinion that, in general, both the contractors and designers are following the specifications for scheduling the projects. In addition, the schedules that were reviewed have sufficient detail, proper duration, and correct logical ties to correctly represent the plan for the construction or design of the projects.

It is the Team's opinion that the work has been managed properly to date. On any large endeavor such as this Program, schedule impacts, and variations in the original plans are a normal part of the overall progress. Monitoring that impact and promptly responding to it is the key to proper management of the overall schedule. It is the Team's opinion that this Program has sufficient components within its scheduling system to permit proper management. Furthermore, interviews with key staff confirmed that the management team is keenly aware of the critical activities and has carefully devised plans to deal with future potential delay events.

The goal of the scheduling effort is to assure that the various components of the Program are completed on time. The completion date for these components are determined and affected by design and construction constraints, financing and funding requirements, and court and regulatory agency dictated deadlines. The deadlines ordered by either the court or the regulatory agencies constitute internal milestones which in this report are referred to as Imposed Milestone<sup>4</sup> dates. The scheduling system and techniques are sound and are being used effectively. Although there has been variations between planned and actual dates on various projects, the ultimate goal of achieving the Imposed Milestone dates appears attainable.

Cost Estimation

The Team examined the methods utilized by the Program participants and managers in developing the Program construction cost estimates. Since 1992, they have been following the "Cost Estimating Guidelines" - Chapter 4 of the *Program Guidelines for Design Consultants*. These guidelines, dated February 1992, employ the American Association of Cost Engineer's definition of Cost Estimates Types/Classes. The guidelines are used to prepare the construction cost estimates at the 30%, 60% and 90% design completion and final pre-bid stages, and to track and control project costs. The Team reviewed cost estimates that had been prepared for various design phases (refer Table VI-3), from 30% design to final design. Estimates examined ranged from one million dollars to over one hundred fifty million dollars. The Team determined that the cost estimates prepared for the Program have been compiled and presented in an organized manner, and have been categorized into various logical groups, such as treatment plants, pipelines, etc., allowing management to effectively track status and progress.

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4. For a more detailed explanation of Imposed Milestone dates please refer to Section II.B.

I. EXECUTIVE SUMMARY

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Estimated cost information was derived from several industry accepted database sources, such as *R.S. Means* and *Richardson*. Based on the Team's evaluation, it is the opinion of the Team that the MWWD's cost estimating techniques and cost estimating process are appropriate, the estimates prepared are detailed and reasonable, and the policies and procedures for cost estimation and control are adequate.

It is the Team's opinion that the construction cost estimates generated during the design stage are based upon sound estimating methodology. It is possible that actual bid prices of the estimated projects may be higher or lower than have been estimated. The City enjoys an excellent bidding climate at the present time, evidenced by the bid results during the past two years. Many individual projects have been awarded at prices lower than their estimated construction value. In general, however, the Team concludes that the total costs estimated at this time for the Program are reasonable for the scope and magnitude of the Program.

Operations & Maintenance

The focus of this evaluation was on current and projected O&M costs of existing facilities and facilities planned under the Program. The Team assessed the adequacy and reasonableness of current and projected budgets and staffing levels for these facilities.

Information was collected on the treatment processes used, staffing, and O&M cost for wastewater treatment facilities in cities of comparable size to the City of San Diego. The O&M budget and staffing projections for these facilities were compared to the facilities included in the Program. A summary of these comparisons is presented in various tables at the end of Section VII.

The actual O&M costs for the Municipal System are reasonable. The FY 1996 Municipal System projected O&M budget of \$17.2 million used in the Financing Plan is reasonable and has been justified by City personnel. Overall, the projected increases in O&M costs for the Municipal Sewerage System ("Municipal System") to FY 2003 are reasonable.

O&M costs for the Point Loma facility are reasonable and compare well with other wastewater treatment facilities surveyed. Planned staffing for the facility is reasonable, considering the current and future improvements. The projected O&M costs for water reclamation and biosolids processing facilities are reasonable. The MWWD staff has continued to refine and streamline these staffing estimates as the program has developed. We believe that this process should continue as the system grows.

The MWWD's use of cost equations for the nonpersonnel O&M costs, based on the types of equipment at each facility, the power needed to operate the facility, and chemical costs, based on anticipated flows and actual O&M costs, is reasonable. The Operation and Maintenance Division administrative groups are also adequately represented in the Financing Plan.

I. EXECUTIVE SUMMARY

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The projected O&M costs for the major pump stations and main interceptor system in FY 2003 are reasonable. The proposed budget is reasonable and takes into consideration all identified major changes to the system.

The Team believes that current facility start-up staffing practices compare well with other new facilities surveyed. It is the Team's opinion that current start-up staffing practices proposed will save the City money in the future because each facility will have a staff that is intimately knowledgeable about the plant and understands the equipment supplied.

Financing Plan

The Financing Plan presents the City's projection of revenues, debt issues and other sources of funds expected to be available during the projection period to meet O&M expenses for existing and proposed Wastewater System facilities, annual debt service requirements, coverage requirements, administrative expenses, payments to reserve funds, and capital expenditures. For purposes of the Series 1993, the Series 1995, and future bond issues, net revenues must also be sufficient to meet applicable debt service coverage requirements in the Bond Documents. The Financing Plan is based on certain assumptions made by the City which are anticipated to be achieved during the projection period.

- Primary revenue sources are sewer service charges from single-family and nonsingle-family users and capacity charges paid upon development of property. An adequate revenue stream from these sources is dependent upon increasing rates and an increasing user base.
- Single-family service charge revenue is computed as a fixed charge multiplied by the number of users. In the case of nonsingle-family users, service charge revenue is computed based on a fixed charge for a proportion of metered water usage.
- The current Financing Plan reflects significant reductions in capacity charge revenue when compared to the Financing Plan examined in the Engineer's Statement of Feasibility dated July 1, 1993. The current assumptions are for no increase in the charge rate and a five percent per year increase in equivalent dwelling units ("EUD's).
- The Financing Plan assumes that the City will approve rate increases for Fiscal Years 1997 and beyond to meet all financial obligations.
- The Wastewater System provides treatment services to fourteen Participating Agencies. Each Participating Agency has entered into a Sewage Disposal Agreement with the City. Under the Sewage Disposal Agreement, a Participating Agency pays an annual capacity service charge and a proportionate share of total O&M expenses. In addition, certain Participating Agencies are obligated to pay a portion of the incremental cost of expanding the system's capacity to 234 MGD. The Sewage Disposal Agreements

I. EXECUTIVE SUMMARY

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expire on June 30 or August 31, 2003, with the Participating Agencies having the option to extend the Sewage Disposal Agreements for an additional ten years.

- Funds exclusive of bond proceeds are invested until needed in the City's pooled fund. Bond proceeds are managed separately by the City Treasurer. The cash flow assumes a reinvestment rate of 5% per annum, which is below the annual rate earned in the pooled fund for nine of the ten years preceding the projection period.
- The assumptions in the Financing Plan concerning future series of bonds to be issued to fund capital improvements include an annual interest rate of 6.5% in FY 1996 and 7.0% thereafter, a term of thirty years, a debt service reserve fund equal to the maximum annual debt service, and a debt service coverage test for net system revenues equal to a minimum 1.2 times maximum annual debt service.

The fees and charges in the Financing Plan were compared with fees and charges of other municipal wastewater programs. The review of fees and charges of other programs indicates that sewer service charges and connection fees are increasing, and that the fees and charges assumed in the Financing Plan are within, but at the upper end of, the range of fees and charges set by other programs.

The Team has concluded that the City's revenue assumptions and resulting projected revenues in the Financing Plan are reasonable. The Team has also concluded that the projected revenues, debt issues, and other sources of funds are adequate to fund projected O&M expenses, annual debt service requirements, coverage requirements, administrative expenses, payments to reserve funds and capital expenditures. The Team has reviewed the Financing Plan and the assumptions, and based on current expected conditions during the projection period, has concluded that the Financing Plan is feasible.

II. THE WASTEWATER SYSTEM

## II. THE WASTEWATER SYSTEM

### A. Introduction

The City currently processes wastewater to the advanced primary treatment stage before ocean disposal. Wastewater is collected in city-owned sewer lines. This collection system is referred to as the Municipal System and is managed by the Water Utilities Department ("WUD"). Effluent is passed from the Municipal System and from comparable systems of adjacent cities, through interconnecting interceptors of the Metropolitan Sewerage System (the "Metropolitan System") which is managed by the MWWD. Collectively, the Municipal System and Metropolitan System comprise the Wastewater System. The Metropolitan System lines converge at principal pump stations and then proceed to the Point Loma Wastewater Treatment Plant ("Point Loma Plant") where the level of treatment, as defined by regulatory standards, is advanced primary treatment. Treated residual sludge is pumped to Fiesta Island for drying before final disposition in a combination of beneficial reuse and landfill disposal.

The Metropolitan System currently consists of the Point Loma Plant, the Point Loma Plant Ocean Outfall, the Fiesta Island Sludge Drying Facility, two wastewater pump stations and the major interceptors. The system was established in 1963 upon the completion of the Point Loma Plant and serves most of the City plus certain neighboring cities and agencies (the "Participating Agencies").

In 1987, the City undertook to significantly upgrade the Metropolitan System, in order to meet the Federal Clean Water Act requirements and to meet the growing needs of the Metropolitan System service area. To achieve these goals, the City established the MWWD, staffed by City employees who are supplemented and supported by a consultant Program Manager, Montgomery Watson Americas, and a consultant Construction Manager, Sverdrup/ICF Kaiser Engineers. The Department has conducted several major studies that have resulted in the conceptual plan for the new systems design, and capital improvement programs.

The Wastewater System Capital Improvement Program (the "Program") for the period July 1, 1995 through June 30, 2003, contains projects to upgrade the Municipal System and Metropolitan System. Those projects managed by MWWD are currently referred to internally as the "Metropolitan Wastewater Plan", which includes the Metropolitan System projects and certain Municipal System projects. (Some of the projects so managed were included in what was previously referred to as the "Consumers' Alternative", but added to those projects are a variety of South Bay facilities, including a water reclamation plant, a treatment plant and sludge processing facilities.) The balance of the projects are managed by the WUD.

### B. Timetable

The Program is a multi-phased, multi-project program which will continue through the year 2050. The general master schedule for the Program contains the sequence of major projects and the individual estimated completion dates for each phase. There are certain important dates within

II. THE WASTEWATER SYSTEM

this schedule which identify key events or milestones. Example milestone dates include: completion dates for certain facilities or activities, the dates certain facilities become operational, or dates for procurement of major equipment. Some of these dates are determined by the unique construction requirements of projects. Others are dependent on financing and funding requirements. Still others are dictated by outside agencies such as courts and regulatory agencies. In this Report these last group of milestone dates are referred to as Imposed Milestone dates and are listed in the table below.

**IMPOSED MILESTONE DATES FOR PROJECT COMPLETION**

<b>Project</b>	<b>Imposed Milestone Dates</b>
<b>North City Water Reclamation Plant</b>	4/30/97
<b>Point Loma Wastewater Treatment Plant Improvements</b>	
Chemical Feed System	1/31/95 <sup>5</sup>
<b>Other Capital Improvement Projects for the Municipal System</b>	
Carmel Valley Trunk Sewer	12/31/96
Encanto Trunk Sewer	4/15/95 <sup>5</sup>
Highland Park Estates Trunk Sewer -- Phase II	12/31/97
North Mission Valley Interceptor -- Phase II	12/31/98
Pump Station No. 65 -- Expansion and Force Main	6/30/96
Rose Canyon Trunk Sewer	6/30/96
Valencia Park Trunk Sewer	12/31/95 <sup>5</sup>
<b>Other Capital Improvement Projects for the Metropolitan System</b>	
North Metro Interceptor -- Phase I	12/31/96
<b>Biosolids Processing Projects</b>	
North Sludge Processing Facility	11/15/97
Fiesta Island Replacement Project	7/15/97
<b>Reclaimed Water Distribution System<sup>6</sup></b>	8/1/97

5. These projects were completed prior to the Imposed Milestone dates.

6. This system being financed through the Water Capital Improvement Program.

II. THE WASTEWATER SYSTEM

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**C. The Capital Improvement Programs**

There are two distinct budgetary programs common to the municipal utility operations for the Wastewater System; one to fund the continuing operating & maintenance of the Wastewater System, and the other to finance the replacement/rehabilitation of existing facilities and the construction of new facilities. This second budgetary program is typically called a capital improvement program, or "CIP".

Since 1963, the City has maintained separate CIPs for the Municipal System and the Metropolitan System because of a distinct division between sewage collection and treatment systems. In May 1990, a third CIP was developed to supplement the treatment facility capital requirements of the Program. In 1994, the City created the MWWD and merged the Clean Water Program with the Metropolitan CIP.

In defining the scope of the current CIP, the CIP's were reviewed for the period FY 1996 through FY 2003. The CIP budgets, escalated for inflation, but excluding costs of financing, are shown below.

• Municipal CIP	\$451.0 million
• Metropolitan CIP	<u>857.5 million</u>
Total Projected CIP Budget:	\$1,308.5 million

Reclaimed water distribution pipelines are not included in the current Program, but are included in the CIP. Although the MWWD staff has responsibility for the design and construction of these pipelines, they are funded from the Water Operating Fund as opposed to the Sewer Revenue Fund.<sup>7</sup> The Santee Wastewater Treatment Plant is not included in the Program. That plant will be built by the Padre Dam Municipal Water District without the financial support of the City.

**D. Engineer's Statement of Feasibility**

The City expects to finance a significant portion of the Program through planned bond offerings. In connection with the City's proposed issuance of Sewer Revenue Bonds, Series 1995, the City retained High-Point Rendel, in association with Damon S. Williams Associates and Lenax Construction Services (the "Team") to provide an Engineer's Statement of Feasibility of the Program. The objective of the Engineer's Statement of Feasibility is to summarize findings of the engineering and financial feasibility evaluations performed by the Team. Six specific areas were evaluated. The following subsections present the Team's qualifications, approach and methodology for each area of investigation.

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7. The Water Operating Fund is managed by the Water Utilities Department. The San Diego City Council has directed that funding of reclaimed water distribution pipelines will come from the City's Water Revenue Fund. Except for the cost of the tertiary elements of water reclamation plants, all other costs and subsequent revenues are expected to be allocated to the Water Revenue Fund.

## II. THE WASTEWATER SYSTEM

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### **E. Consultant Qualifications**

High-Point Rendel is an international, publicly traded group of companies specializing in construction consulting. High-Point Rendel has a 150-year heritage in the fields of design, engineering, construction management, inspection, claims analysis, dispute resolution, and the commissioning and maintenance of major projects throughout the world. High-Point Rendel has thirty-four offices worldwide staffed by over 800 professionals. High-Point Rendel's experience with wastewater treatment plants includes construction management, cost estimating, CPM schedule preparation, schedule evaluation, value engineering, construction claims analysis, defective construction investigations, and dispute resolution.

Damon S. Williams Associates of Phoenix, Arizona, specializes in water and wastewater planning, engineering, operations and maintenance, cost estimating, design and construction administration, and has authored operations and maintenance manuals. Related experience includes a unit process operation and maintenance evaluation (Bench Marking Study) as well as preparation of Operation and Maintenance Manuals for the East Bay Municipal Utility District (Oakland, CA).

Lenax Construction Services, Inc. is a Southern California consulting firm providing services to the architectural and engineering community as well as public and private sector owners. Related experience includes estimating support services for the San Diego Metropolitan Development Transit Board and to various Architectural and Engineering firms.

In July of 1993, High-Point Rendel (known as High-Point at that time), along with its consultants prepared an Engineer's Statement of Feasibility in connection with the issuance of the Sewer Revenue Bonds, Series 1993. That report addressed issues and areas of investigation similar to those in this Report.

### **F. Methodology of Review**

The City required that the Team's analysis and Report address, and provide independent opinions regarding, six specific areas of investigation. These six areas are: organization and management structure, engineering, scheduling, cost estimation and budgeting, operations & maintenance, and the financing plan. The investigation focused on analysis of the Program, and the City's ability to fund and meet its own timetable and the Imposed Milestone dates. In addition, the Team investigated the detailed cost estimates by year and by major project, and the City's ability to maintain and adequately fund operations & maintenance. Finally, the Team evaluated the program's two year track record, of comparing actual versus planned progress and costs.

The steps undertaken to accomplish this assignment included data collection, project site investigations, MWWD staff interviews, document and program analysis, and the preparation of this Report.



## II. THE WASTEWATER SYSTEM

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The work began with presentations of elements of the Program by City department and division heads and the Program Manager. The Team then conducted interviews of key MWWD and other City staff and obtained various work products of the MWWD, including documents, schedules, estimates, and directives. Appendix A includes a representative list of documents that the Team received and reviewed. The third step involved document and program analysis. MWWD documents were critically reviewed by the appropriate Team members. The documents provided were presumed to be accurate and reliable. As appropriate, financial, cost and scheduling documents were reviewed to verify adequacy and completeness; however, all other documents, such as memos, organization charts and official documents, were not independently verified. To compare the current status of various segments of the Program with planned performance, the Team reviewed monthly status reports from January 1992 through July 1995. Additional information was requested from staff when necessary.

The final step undertaken in this assignment was the preparation of this Report. Sections III through VIII discuss the statement of conditions, findings, and the opinions of the Team members for each of the six evaluated areas. The sections, in general, stand alone and present the findings and opinions for the specific area. A summary version of relevant findings and opinions is contained in the Executive Summary.

III. ORGANIZATION AND MANAGEMENT STRUCTURE

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### III. ORGANIZATION AND MANAGEMENT STRUCTURE

#### A. Introduction

The success of the Program will depend to a certain extent on its staffing, organization, and management. The majority of the projects contained in the Program will be managed by the MWWD, therefore, the Team focused its review on the current and projected organization and management structure of the MWWD to determine if it is sufficient to fulfill the Program's main objectives; namely, to design, bid, and construct the proposed Program facilities. Section VII evaluates the adequacy of proposed staffing levels for operation and maintenance of these facilities once they are built. The restoration, repair, and replacement of existing sewer lines and pump stations has historically been managed by the WUD. The WUD has been performing this work satisfactorily over many years and this performance is expected to continue. There has not been any significant change in the management organization of the WUD in the recent past, therefore, its past competent performance is expected to continue.

#### B. Organization and Management

The Team examined the adequacy of current and proposed organizational structures and staffing plans to implement the design, bid and construction of the Program. The analysis of this structure is presented below.

##### B.1 ORGANIZATIONAL ISSUES

To successfully achieve the goals of the Program, the City must be able to perform or proceed with a number of tasks over the course of the next few years. First and foremost, the City must maintain the operation of the Metropolitan System continuously without diminishing capacity. Disruption of service, a degree of which is inevitable, must be minimized and controlled. New facilities must be designed, built, and brought on line to replace or supplement capacity. A phased introduction of new facilities, in a timely manner, to meet anticipated growth in capacity requirements, will provide an effective use of resources; human, financial and material.

The MWWD has two primary components. One component of the MWWD exists for the purpose of designing, bidding and constructing the new facilities. This component will diminish or disappear once the facilities are completed. The remaining component, the Operation & Maintenance Division, provides planning for the operations and maintenance of the facilities as they are completed.

The MWWD's Operation and Maintenance Division is responsible for the operations & maintenance of the Metropolitan System. Its organizational structure is appropriately oriented toward that end. Current planning requires operations personnel to be on site six months prior to equipment testing and start-up and one year prior to facility start-up. This enables staff to be fully trained and competent to run the facilities before the first day of operation. Section VII presents in greater depth the Team's analysis of operations and maintenance staffing for the Program.

### III. ORGANIZATION AND MANAGEMENT STRUCTURE

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Organizational planning has been affected by significant CIP changes such as the shift from Alternative IV to the Consumers' Alternative and recently to the current Program. Management flexibility has been required to accommodate changes in program scope, such as the rerouting of the San Diego River Outfall to the similar deep tunnel Point Loma Tunnel Outfall, and the changes anticipated under the current Program. Over the next eight years, and subsequently during Phase II of the Program, the commencement and completion of distinct phases of construction and the associated staff buildup and reduction, must also be considered during effective organizational planning. As one might expect, since 1992 there has been a reduction of staff within the Program Manager's ranks and an increase in construction management staff. It is expected that as progress is made from pre-design, through design, then construction, and finally close out, some divisions will shrink and others will increase in staffing.

The MWWD, whose primary responsibility is to plan, design and construct facilities as well as to maintain and operate those facilities, has prepared a detailed organization plan (see Table III-1). The Team specifically reviewed this organizational structure. Positions are only filled to the extent that they are needed and for this reason this structure is viable for the Program. This organizational structure also provides flexibility to accommodate program changes.

The MWWD's organizational structure is similar to that of other large wastewater departments. A unique characteristic of this structure is the incorporation of consultants within the organization. This provides two valuable benefits:

- Flexibility of staff size - personnel have specific responsibilities for a defined project or projects.
- Staff with relevant education and experience can be added as needed to handle specific functions.

While it is not common to have consultant's staff positioned as high in the organization as shown, this has been done in other major programs. Examples of high-level staffing by consultants in municipal agencies are the Los Angeles Clean Water Program, the San Francisco Clean Water Program and the Boston Harbor Cleanup Program.

#### B.2 PROJECT MANAGEMENT

The Team reviewed the various reports that the management uses to monitor the overall progress of the Program and also attended a weekly staff meeting. The Team believes that through MWWD's regular status meetings and the extensive reporting procedures, the management is aware of important issues that affect the Program and responds to them promptly. The management has correctly identified problems in the past and has properly acted to correct them or mitigate their effect. During the interviews with key senior managers it was clear that they were aware of the status of individual components of the Program and more importantly, knew of the critical problems and the mitigation efforts by staff. It is the Team's opinion that the

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III. ORGANIZATION AND MANAGEMENT STRUCTURE

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existing management structure and reporting systems provide the means for proper management of the Program.

The restoration, repair, and replacement of existing sewer lines and pump stations is carried out by the WUD. This department has historically performed this ongoing capital improvement work satisfactorily and is expected to continue to do so. The organization structure of this department has not significantly changed in the recent past and therefore, the past competent performance of this organization is expected to be maintained. The repair/replacement operation carries less risk than new construction projects such as the North City Water Reclamation Plant because the scope of work is known and repetitive. There exists internal historical records of cost, schedule, and as-built documents that are available to the department for managing this operation. The Team believes that the future performance of the WUD will be similar to that of prior years.

### B.3 PROJECT IMPLEMENTATION RESPONSIBILITIES

A twelve-page matrix describing the roles of the MWWD Divisions and its consultants regarding sixty-four distinct tasks covering design, bid, and construction phases was finalized on August 1, 1991. The preparation of that document exhibits good management practice of assessing needs and assigning responsibilities. It sets forth in writing, for all those involved with the Program, how each division will support or take the lead for a specific task.

In June 1992, the MWWD issued a revision to the matrix affecting the construction phase. The principal change in the revised matrix is that the responsible participant is defined by functional divisions rather than by City department or consultant entities. For example, the tasks to be performed by the Program Management Division could be carried out by either City staff or its Program Manager consultant.

A final observation is that the City's Program Management Division will continue to be heavily used through start-up of the various facilities. The Division will not only be responsible for a great number of the construction phase tasks but it will also be responsible for the oversight of the consultant Construction Manager ("CM"). MWWD management is aware of the substantial role of this Division and has committed to provide support as needed. If the proposed organizational plan is implemented, the Program Management Division will be adequately staffed and organized to meet its projected responsibilities.

### C. Conclusion

The current organizational structure of the MWWD is adequate for the tasks of design, bidding, and construction of the Program's facilities.

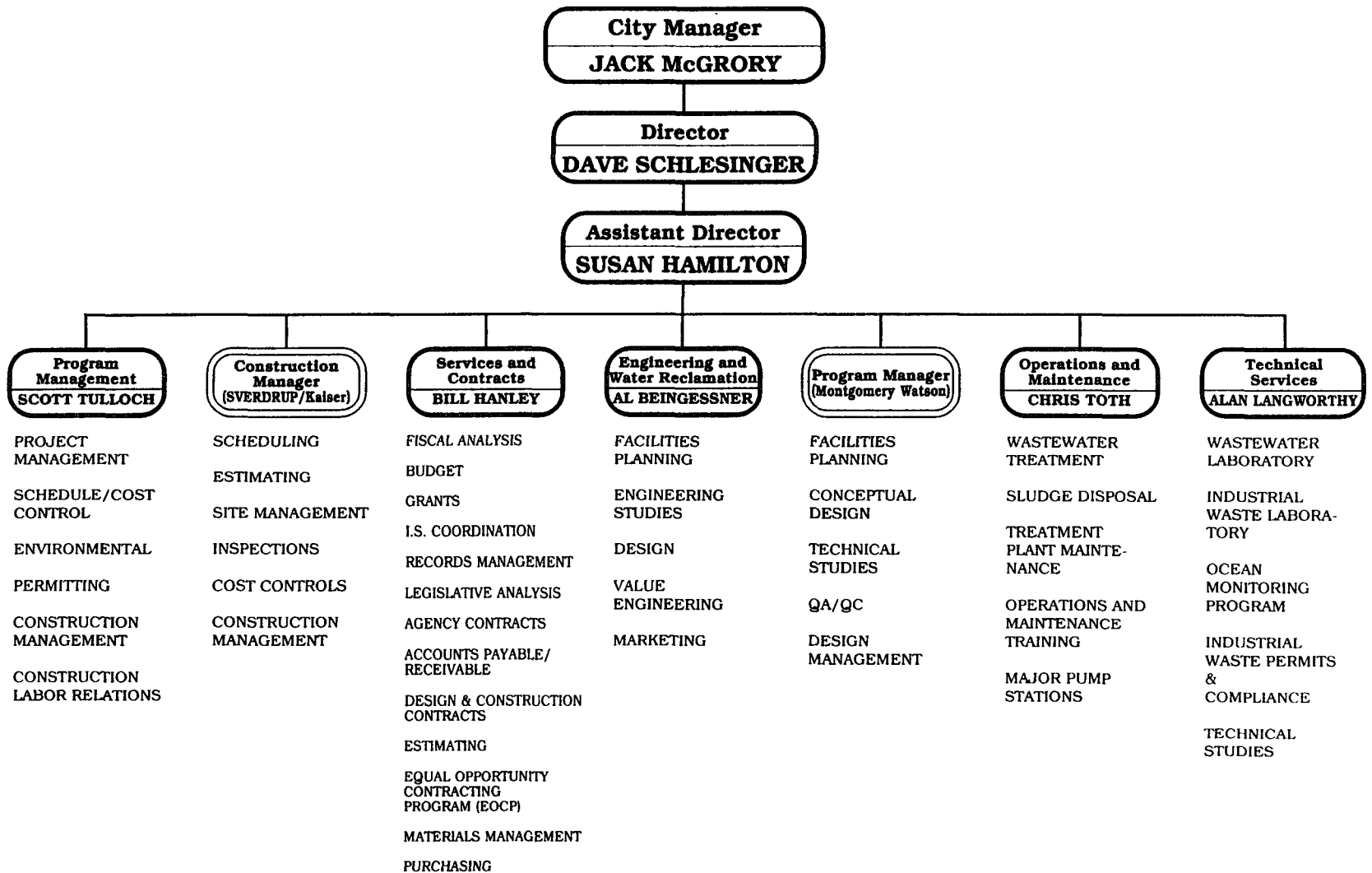
The Team's evaluation of the current MWWD management and organization included an examination of the skills, practice, and professionalism of the City's staff and consultants. Based on this assessment, the Team expects that future program management will be adequate.

III. ORGANIZATION AND MANAGEMENT STRUCTURE

TABLE III-1

**Metropolitan Wastewater Department  
FY 1996**

Rev. 08-18-95



IV. ENGINEERING

## IV. ENGINEERING

### A. Introduction

The Team evaluated the City's ability to implement, complete, maintain system integrity, and achieve customer satisfaction for its CIP. The Team reviewed the Engineering process, its effectiveness, and its scheduling, which are discussed in this section. The ability to maintain system integrity is discussed in Section VII, Operations & Maintenance. It is the Team's opinion that the City has established an adequate system to design the improvements and implement them.

### B. Project Status

The Program includes major treatment plants and distribution systems which, for engineering, management and scheduling purposes, are divided into five major groups: 1) Point Loma Plant; 2) Northern Pipelines, Pump Stations, and Plant Projects; 3) a Reclaimed Water Distribution System; 4) South Bay Projects; and 5) Biosolids Processing Projects. This grouping is used by the Construction Management Division for the purpose of scheduling the projects and does not correspond to other groupings, such as those for cost estimation or financing discussed in Sections VI and VIII. This grouping reflects the logical functional needs of engineering as opposed to accounting. Each group is further divided into smaller sections, such as a pump station, a building, or a segment of pipeline. Each section is engineered and designed as a unique "design package". A design firm is selected to provide the complete design documents. The design firm's responsibilities include conceptual design, final design, including preparation of construction documents, and resolving questions during the construction phase. City staff, along with its consultants, manage the various design firms.

As of August 1995, approximately 60% of the design has been completed and 18% of the program is under construction. Competent design firms have been retained that have experience designing complex engineering processes that make up the various projects of the Program. Most of the design packages were delivered on schedule, but as can be expected with large complicated projects, some of the design packages have been delivered late.

Overall, the design packages have been delivered on time. Those packages which have been late have impacted the follow-on construction activities by shifting them to a later date than originally planned. However, these impacts have generally been absorbed by project duration contingencies. The construction schedule and status of these projects is discussed in Section V Scheduling. This section only discusses the status of the engineering (pre-construction) phase.

The following is a summary of the current status of the design packages, including ones under construction (based on the MWWD's Monthly Project Critical Path Report, dated July 1995) and updated through September 8, 1995. This table includes projects within both the Metropolitan System and the Municipal System that are managed by MWWD. The grouping of the projects follows that used by the CM in its status reports on the Program:

IV. ENGINEERING

<u>PROJECT GROUP</u>	<u>DESIGN FIRM</u>	<u>PERCENT COMPLETE OF DESIGN</u>	<u>PROJECT STATUS</u> <sup>8</sup>
<b>POINT LOMA WWTP PROJECTS</b>			
• Point Loma South Effluent Outfall Connection (SEOC)	Black & Veatch	100%	Under construction
• Point Loma Sedimentation Basins 11 & 12	Black & Veatch	100%	Under construction
• Point Loma Disgesters N1 & N2	Lee & Ro	100%	Under construction
• Point Loma Digester Facility Upgrade	John Carollo Engineers	70%	Design package 1 is complete and design packages 2 thru 6 are in progress
• Point Loma Headworks/Odor Control and Grit Tank Replacement (HOG)	Black & Veatch	10%	30% Design submittal on schedule for 11/13/95
• Point Loma Water Tank and Pipeline	Corrao - Brady Group	30%	30% Design received 8/23/95
<b>NORTHERN PIPELINES, PUMP STATIONS AND PLANT PROJECTS</b>			
• North City Tunnel Connector	Metcalf & Eddy	100%	Under construction
• S. Metro Interceptor 84" Rehabilitation	MWWD (In-House)	68%	Design completion is scheduled for 10/13/95
• S. Metro Interceptor 108" Rehabilitation	MWWD (In-House)	65%	Design delayed, completion scheduled for 12/4/95
• North Metro Interceptor, Phase I	Montgomery Watson	100%	Under construction
• North Metro Interceptor, Phase II	Montgomery Watson	92%	Final Design is due 9/15/95 per the revised schedule

8. Based on the Monthly Status Report for the month of September 1995; dated October 4, 1995

IV. ENGINEERING

<u>PROJECT GROUP</u>	<u>DESIGN FIRM</u>	<u>PERCENT COMPLETE OF DESIGN</u>	<u>PROJECT STATUS</u> <sup>8</sup>
• Peñasquitos Canyon Trunk Sewer Relief and Pump Station	Boyle Engineering	95%	The 100% design submittal for Pump Station scheduled for 10/6/95
• Carmel Valley Trunk Sewer Replacement	Engineering Science	100%	Under construction
• Sorrento Valley Water Main Relocation	Engineering Science	100%	Under construction
• Pump Station 65 Expansion & Force Main	Engineering Science	100%	Under construction
• North City Water Reclamation Plant	CH2M Hill	100%	Under construction
• Force Main 1 & 2/East Portal Investigation	Malcolm Pirnie	100%	Design completed on 6/16/95

**RECLAIMED WATER DISTRIBUTION - OPTIMIZED SYSTEM**

• Genesse Ave. Subsystem, Pkg. No. 1	HYA	92%	Final design postponed to February, 1995
• Miramar Rd. Subsystem, Pkg. 2	Lee & Ro	97%	Camera-ready documents expected 10/19/95
• Miramar Rd. Subsystem Ext., Pkg. No. 4	Camp, Dresser & McKee	92%	100% Design is scheduled for 10/19/95
• Miramar Storage Tank & Raw Water Connection, Pkg. No. 5-A	Berryman & Henigar	94%	Final design for offsite piping scheduled for 10/20/95 and 90% Design for remainder scheduled for 10/10/95
• Scripps Ranch/I-15 Subsystem, Pkg. 5-B	AKM Consulting Engineering	93%	Final Design scheduled for 11/16/95

8. Based on the Monthly Status Report for the month of September 1995; dated October 4, 1995



IV. ENGINEERING

<u>PROJECT GROUP</u>	<u>DESIGN FIRM</u>	<u>PERCENT COMPLETE OF DESIGN</u>	<u>PROJECT STATUS</u> <sup>8</sup>
• Scripps Poway Parkway, Pkg. No. 6	Barrett Consulting Group	81%	90% Design is due 10/10/95
• University City Subsystem, Pkg. No. 12	Project Design Consultants	84%	Final Design scheduled for 11/18/95
• Sorrento Valley/Carroll Canyon Subsystem, Pkg. No. 16		0%	Design Contract negotiations are ongoing

**SOUTH BAY**

• South Bay Water Reclamation Plant	Parsons/Engineering Science	30%	30% Design was submitted on 8/7/95 and 60% Design scheduled for 12/21/95 completion
• South Bay Reclamation Sewers and Pump Station	Berryman & Henigar	10%	10% Design was submitted on 8/30/95
• Dairy Mart Road Bridge	Kercheval Engineers	30%	30% Design was received 9/22/95
• South Bay Ocean Outfall	Parsons/Engineering Science	100%	NTD for tunnel package issued on 9/28/95

**NORTHERN BIOSOLIDS PROCESSING PROJECTS**

• FIRP Phase II Digested Sludge & Centrate Pipelines	Enartec	94%	Final designs received on Package A, B & C on 9/27/95 and Package D is scheduled for 12/8/95
• FIRP Pump Station at Point Loma	Metcalf & Eddy	100%	Under Construction
• FIRP/NSPF	Metcalf & Eddy	100%	Under construction

8. Based on the Monthly Status Report for the month of September 1995; dated October 4, 1995

IV. ENGINEERING

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<u>PROJECT GROUP</u>	<u>DESIGN FIRM</u>	<u>PERCENT COMPLETE OF DESIGN</u>	<u>PROJECT STATUS</u> <sup>8</sup>
• North City Raw Sludge and Water Pipeline & Pump Station	Lee & Ro	100%	Land easement agreement expected by 10/6/95

Another area investigated by the Team was the re-design of systems to upgrade or enhance the facility after the initial design was already completed. For example, at the North City Water Reclamation Plant ("NCWRP"), the City decided to eliminate the use of liquid chlorine as a disinfectant and switched to sodium hypochlorite solution. This change was accomplished by modifying the sodium hypochlorite metering pumps and controls, and converting a ferric chloride bulk storage tank to provide a fourth sodium hypochlorite tank. The Program Management Division set time frames for the redesign packages to be completed by the designer, CH2M Hill. Ultimately, the construction impact was minimized due to the close monitoring by the Program Management Division along with close coordination with the affected contractors.

**C. Conclusion**

The Team concludes that the City has selected competent design firms to handle the complex engineering design associated with the Program. The Program Management Division is working cohesively to react and mitigate the impact of any design slippages or enhanced re-design packages. The tracking system in place is adequate to manage the engineering of the Program.

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8. Based on the Monthly Status Report for the month of September 1995; dated October 4, 1995

V. SCHEDULING

## V. SCHEDULING

### A. Introduction

Based upon the Team's review of project documents and interviews with staff regarding the scheduling efforts on the Program, the Team believes that the project schedule is reasonable and attainable. The MWWD has established and adheres to sound scheduling policies and procedures. These policies and procedures are technically sophisticated and are comparable with other scheduling techniques used on projects of similar size and magnitude.

The progress of the Program to date has been carefully monitored and revised as required. The NCWRP is on or ahead of schedule. The Northern Sludge Processing Facility/Fiesta Island Replacement Project ("NSPF/FIRP") is on schedule with the exception of one facility. However, acceleration options are available if unanticipated delays occur. There have been delays in preconstruction activities such as design, permitting, easement acquisition, and environmental documentation on certain projects. These delays have been carefully monitored, and where appropriate, contingency plans have been developed to mitigate their impact on the schedule. The majority of the construction projects are on, or ahead of schedule. It is the Team's opinion that the scheduling efforts on this Program are appropriate.

### B. Review of Scheduling Techniques

The Program Management Division uses Primavera Project Planner (P3) scheduling software for the scheduling efforts on this Program. Three levels of scheduling are used. Level One is a summary level project schedule which allows management to monitor the overall progress of the work on the entire program. Level Two is a cost loaded Critical Path Method ("CPM") project schedule which provides additional detail for the individual components of the program. Level Three includes detailed schedules which are based upon individual project schedules that are prepared by design consultants, the construction management team, or construction contractors. A Work Breakdown Structure has been established to permit compatibility of schedules from the various project sites and project participants and to allow upper management to view summary level schedules. The Program Manager maintains the schedules for the overall program while the Construction Manager obtains and monitors the schedules for the construction activities (commencing with the notice-to-proceed date). The Program Management Division also monitors the construction schedules received from the construction management team.

The scheduling guidelines and specifications stated in the various contract documents are sufficiently detailed and sophisticated to allow proper monitoring of the progress of the work. These specifications are generally followed by designers and contractors. Various teams responsible for either producing or monitoring these schedules are performing their tasks on a timely basis. The construction management team produces monthly status reports, consistently and in a timely fashion. The Program Management Division similarly produces monthly cost and schedule status reports that are distributed to the various management teams. When problems are discovered, they are reported. In addition, recovery and contingency plans are developed and

V. SCHEDULING

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incorporated in the overall Program. We believe these scheduling efforts are adequate and are conducted in a timely manner.

In order to verify that the reports produced through these scheduling efforts are sufficient, the Team obtained and reviewed various reports produced during the normal course of business. One such report, called Construction Phasing and Start-up, is a summary level schedule that graphically shows the ties between the different critical milestones of the program for the related projects. For example, the NCWRP's 16 prime contract milestones, plus the inflow structures, and the reclaimed water distribution pipeline are all connected on this schedule. This allows upper management to quickly identify those projects that may have an adverse impact on other related projects. This schedule is electronically generated through the various schedules that are provided from the other components of the program, and manually adjusted when appropriate. This type of macro level reporting allows upper management to monitor the overall progress of the project and to specifically identify the interrelationship of the various components of the program. Another similar report is the Construction Bid Milestone report which is issued every week. This report forecasts the construction notice-to-proceed date and compares it with the reported notice-to-proceed dates from the monthly status reports. This document allows upper management to identify those projects whose start of construction activity is expected to be impacted by preconstruction activities. These two examples of macro level monitoring of the project indicate that an adequate level of reporting has been incorporated within the scheduling system of this Program.

The Team also reviewed the micro level scheduling efforts of the Program. The Team interviewed the Program Management Division staff and reviewed several construction schedules provided by contractors on various projects. It is the Team's opinion that, in general, both the contractors and designers are following the specifications set forth for the scheduling on the projects. In addition, the schedules that were reviewed have sufficient detail, proper duration, and correct logical ties to correctly represent the plan for the construction or the design of the projects. These schedules are closely reviewed and monitored by the appropriate staff, such as the CM's schedulers assigned to the individual sites. Individual internal milestones within each schedule allow the schedulers to monitor the short term progress on the project and to identify delays promptly.

**C. Actual Performance to Date**

The Team reviewed the status reports from January 1992 through July 1995, and compared the progress of the work performed to date with the planned schedules. In general, some of the pre-construction activities have experienced delays. Projects where construction has started are generally ahead of schedule. The delays during preconstruction activities have been due to delays in design, design revisions, permits, environmental documents, and difficulties in obtaining easements and negotiating lease agreements. For example, the Notice-to-Proceed ("NTP") date for the Centrifuge Facility at the NSPF/FIRP site was delayed until August 22, 1995, pending the resolution of the lease agreement with the U.S. Navy. Similarly, problems with obtaining

#### V. SCHEDULING

railroad easements have delayed certain pipeline activities. The overall impact of these preconstruction delays has been absorbed by the contingency that was incorporated in the planned schedules. For example, the amount of time allotted for the advertise, bid, and award activities to establish the NTP date was purposely set with sufficient duration in it to allow absorption of such adverse impacts to preconstruction activities. Despite these delays to the original schedule, most projects are still projected to be completed prior to the Imposed Milestone dates. However, certain projects, such as the NSPF/FIRP site and the Reclaimed Water Distribution System, have been delayed such that the planned construction completion dates have been shifted very close to the Imposed Milestone dates, resulting in a very aggressive schedule. The management team is aware of the critical nature of these projects and has developed contingency plans. For the NSPF/FIRP site, the recovery plan includes the reduction of the time allotted for the start-up activities. For the Reclaimed Water Distribution System the contingency plan is to shift the milestone date from the start of the NCWRP start-up activity to the completion of the NCWRP start-up. This may result in a situation where the plant has become operational and is producing reclaimed water, but the required distribution pipelines are not complete. The contingency plan for such an event is to direct the reclaimed water back into the sewer lines and deliver it to the Point Loma Plant for reprocessing.

An additional impact of the delays in the pre-construction activities is the shifting of certain construction projects from fiscal year 1995 to fiscal years 1996 and 1997. It is expected that the volume of construction activities will increase dramatically as a result of this shift in phasing of various facilities in the Program. This was discussed with the staff members and it appears that the contingency plans devised will be sufficient to handle this increased volume of construction activity.

It is the Team's opinion that scheduling of the work has been managed properly to date. On any large endeavor such as this program, schedule impacts, and variations in the original plans are a normal part of the overall progress. Monitoring that impact and promptly responding to it are the key to proper management of the overall schedules. It is the Team's opinion that this program has sufficient components within its scheduling system to permit proper management. Furthermore, interviews with key staff confirmed that the management team is keenly aware of the critical activities and has carefully devised plans to deal with future potential delay events.

#### D. Current Status

A brief status of the Program is provided below.

##### D.1 POINT LOMA PLANT

Both design and construction activities are ongoing on this site. The projects that remain under design are Point Loma Digester Facility Upgrade, Point Loma Headworks Odor Control & Grit Processing, Point Loma Water Tank and Pipeline, Plant Access Road, Scum Removal System, North Operations Building, Power Generation and Distribution Upgrade, Chemical Feed Systems Phase II, and the North Shore Protection Improvements. Construction projects for the Point

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Loma Plant are approximately 7% complete (based on cost). Construction activities are expected to continue through the year 2000. The projects at this site are generally on schedule. The City has met all Imposed Milestone dates and there are currently no future Imposed Milestone dates to be met at this site.

D.2 NORTHERN PIPELINES, PUMP STATIONS AND PLANT PROJECTS<sup>9</sup>

The design of the pipelines, pump stations, and NCWRP are nearing 100% completion. The South Metropolitan Interceptors (84" and 108"), Peñasquitos Canyon Trunk Sewer Relief and Pump Station, and the North Metropolitan Interceptor Phase II are scheduled for completion in September 1995. Construction of the pipelines and pump stations began in August 1993 and is 8% complete by cost and 25% complete by time (as of July 1995). The NCWRP began its construction in May 1993 and is 48% complete by cost and 58% complete by time (as of July 1995). The following Imposed Milestone dates must be met on the following projects:

- |  |                   |
|--|-------------------|
| • Carmel Valley Trunk Sewer Replacement      | December 31, 1996 |
| • Pump Station 65 - Expansion and Force Main | June 30, 1996     |
| • North Metropolitan Interceptor-Phase I     | December 31, 1996 |
| • North City Water Reclamation Plant         | April 30, 1997    |

Based on current schedules it is expected that these dates will be met on all projects except that the MWWD is currently projecting that Pump Station 65 may be completed 30 days late. Recovery plans are available to MWWD to exercise in order to meet the Imposed Milestone date for completion of the Pump Station 65.

D.3 SOUTH BAY PROJECTS<sup>10</sup>

South Bay projects include future plants and a distribution system. The South Bay Ocean Outfall project is 100% designed. The remaining projects are in early design stages. The scheduled completion date for the South Bay Ocean Outfall project is June 30, 1998, which is an accelerated schedule. This date is expected to be met.

D.4 NORTHERN BIOSOLIDS PROCESSING PROJECTS

The design of the Biosolids Processing Projects is nearing 100% completion, except for the FIRP Phase II Digested Sludge and Centrate Pipelines, which is 90% complete. Bids have been opened on six of the thirteen construction contracts for the NSPF. NTP's have been issued on three of the contracts. The actual percentage of completion of construction at the NSPF is 3.2% (as of July 1995). Construction for the North City Raw Sludge and Water Pipelines was scheduled to

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9. In the Official Statement, under Table 4, these projects are spread among NCWRP, major interceptors (North and South), and Municipal System Projects.

10. In the Official Statement, the South Bay Projects include the water reclamation plant, the treatment plant, the South Bay sewer conveyance system and the ocean outfall.

V. SCHEDULING

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begin in August 1995, but has been delayed due to U.S. Navy lease agreement negotiations. The NTP occurred on June 30, 1995, for the FIRP Pump Station at Point Loma. The following Imposed Milestone dates apply to the operational completion of the projects:

- |                                       |                   |
|---------------------------------------|-------------------|
| • Northern Sludge Processing Facility | November 15, 1997 |
| • Fiesta Island Replacement Project   | July 15, 1997     |

The construction schedule on the FIRP/NSPF is aggressive but achievable. In the Team's opinion, in order to achieve these dates, some acceleration of the schedule may be necessary.

D.5 RECLAIMED WATER DISTRIBUTION SYSTEM<sup>11</sup>

All projects except one are currently in the design phase. In May 1995 the U.S. District Court assigned to monitor compliance of the City's Wastewater System ordered the City to build a reclaimed water distribution system by August 1, 1997. In order to meet this deadline, the start of construction on all projects was accelerated and some construction durations shortened. This schedule remains very tight and aggressive. However, contingency plans are available to the City in the event of unforeseen delays. It is expected that certain acceleration measures may become necessary in order to meet the Imposed Milestone date.

E. Conclusion

The scheduling system and techniques are sound and are being used effectively. Although there have been variations between planned and actual dates on various projects, the ultimate goal of achieving the Imposed Milestone dates appears attainable.

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11. The Reclaimed Water Distribution System is funded by the Water Operating Fund

VI. COST ESTIMATION

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## VI. COST ESTIMATION

### A. Introduction

The Team examined the methods used by the Program participants and managers in developing the Program construction cost estimates. Since 1992, they have been following the "Cost Estimating Guidelines" - Chapter 4 of the *Program Guidelines for Design Consultants*. These guidelines, dated February 1992, employ the American Association of Cost Engineer's definition of Cost Estimates Types/Classes. The guidelines are used to prepare the construction cost estimates at the 30%, 60% and 90% design completion and final pre-bid stages, and to track and control project costs. The Team reviewed cost estimates that had been prepared for various design phases (refer Table VI-3), from 30% design to final design. Estimates examined ranged from one million dollars to over one hundred fifty million dollars. The Team determined that the cost estimates prepared for the Program have been compiled and presented in an organized manner, and have been categorized into various logical groups, such as treatment plants, pipelines, etc., allowing management to effectively track status and progress.

### B. Review of Estimating Techniques

The Program estimates were prepared using cost information derived from several industry accepted database sources, such as *R.S. Means* and *Richardson*. These sources were used along with the estimator's judgement for the specific type of project. Additionally, the estimator obtained quotations from local suppliers and contractors regarding costs and production rates for various pieces of heavy equipment in different types of construction operations. General historical data and results from similar specific pipeline projects that have been recently bid and/or constructed were also used. Based on the Team's evaluation, it is the opinion of the Team that the cost estimating techniques and cost estimating processes used are appropriate, the estimates prepared are detailed and reasonable, and the policies and procedures for cost estimation and control are adequate.

### C. Estimating Construction Costs

The "Cost Estimating Guidelines" - Chapter 4 of the *Program Guidelines for Design Consultants* were used to prepare the estimates by the design consultants throughout the different stages of the design. These estimates have been developed for each individual project on the basis of the quantities of needed materials, construction equipment required, and construction activities based on design drawings, details, and specifications. Labor dollars were developed using current *Richardson* and *R.S. Means* tables and the estimator's judgement. Construction crew mixes were used to apply a composite labor cost to the quantities developed in the cost estimate. Material and equipment costs were obtained by vendor verification or by industry accepted estimating guides such as *R.S. Means* and *Richardson*.

Other applicable costs were added to the estimate, such as state and local taxes, bond and insurance, a 5% general contractor markup on sub-contractors, and 10% general contractor overhead and profit. The estimates represent what a prime contractor would be expected to bid



VI. COST ESTIMATION

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for constructing the facility or pipeline at a certain point in time. To compile, sort, and extend the estimates, the MWWD uses cost estimating software produced by *G-2 Estimator*.

The Program Management Division uses cost loaded schedules and cash flow projections to allocate costs to separate fiscal years and then each fiscal year is escalated to the mid-point of construction.<sup>12</sup>

**D. Contingencies**

A global 5% contingency was added to the construction cost estimates for unanticipated refinement or changes in design and construction scope, and to allow for environmental mitigation and unanticipated differing site conditions.

This 5% markup for contingencies is intended to cover the cost of design growth and unplanned items that may arise during both detailed design and construction. In addition to unplanned items, there will remain unquantifiable, yet foreseeable, items that most likely will be encountered, such as: groundwater problems, hazardous materials problems, adverse soil and weather conditions, utility obstructions, environmental mitigation, special insurance for freeways and railroads, as well as other unidentifiable costs which are correctly addressed by way of the contingency. By allowing a provision for such contingencies, the MWWD generates a conservative estimate of costs, thereby reducing the possibility of a funding shortfall. At this point in the progress of the Program, the 5 percent contingency is considered by the Team to be reasonable.

**E. Field Order Allowances**

A provision for a Field Order Allowance (up to 5% of the estimated construction cost) for work which is currently not identified in the contract documents has been added to each construction contract. This allowance covers unanticipated refinement or changes in design and construction scope and differing site conditions. Work covered by Field Order Allowance provisions will be performed when specifically authorized in advance by the City. This allowance is based on what changes could be expected to occur during construction of the facility or pipeline. It is the Team's opinion that the Field Order Allowance of 5% is reasonable for a program of this complexity and size.

**F. General Allowances**

Another allowance is added to the estimate for a classification of indirect, but project-related costs, identified as Program Administration, Design Engineering, Permits and Fees, and Construction Management. Finally, Land Acquisition costs, where applicable for site and right-of-way acquisitions, are added. The amounts for right-of-way acquisitions are provided by the City's Real Estate Assets Department.

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12. Escalating costs to the midpoint of construction simplifies the process of estimating future, long-term, inflated construction costs. The procedure assumes two conditions: 1) that expenditures will be symmetrical on either side of the midpoint, typically in a bell curve; and 2) that inflation is constant over the life of the project. Given the limitations in accuracy in such large-scale projects, these assumptions are reasonable.

VI. COST ESTIMATION

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The 29.86% general allowance for the entire project, for engineering, legal and administration overhead costs associated with the fulfillment of the construction contracts is an allocation carried through all stages, including construction. The percentages currently used by the MWWD are based in part on the Program's historical data over the last two years. A breakdown of these forecasted costs was reported as follows (refer to Tables VI-1 and VI-1A):

• Program Administration	14.35%
• Design Engineering	9.56
• Permits and Fees	0.77
• Construction Management	<u>5.18</u>
TOTAL	29.86%

The reported General Allowance currently used by MWWD in its cost forecasting compares favorably with the originally estimated General Allowance of 30% (including 0.5% for value engineering) as reported in the Engineer's Statement of Feasibility prepared in July of 1993.

**G. Special Estimating Considerations**

While the *Means* and *Richardson* data was utilized for estimating construction costs, the costs have been adjusted based on the professional judgement of the estimator and vendor verifications of the costs. After the Design Consultant submits the estimate, the Program Management Division and the CM review it for inclusion of all major scope elements and field allowance allocation. Any major deviations from the scope are discussed between the Program Management Division, the Construction Manager, and the Design Consultant. After a consensus is achieved, the Program Management Division includes the cost estimate in the final budget.

**H. Actual Construction Contract Experience**

To date, of 40 construction contract bids that have been opened, 34 have been awarded and are listed below.

**H.1 North City Water Reclamation Plant ("NCWRP")**

Twelve construction contracts have been awarded on the NCWRP project for a total amount of \$102,679,000.

- Initial Site Preparation
- Influent Pump Station Substructure
- Aeration
- Secondary Clarifiers & Tertiary Filters
- Headworks & Primary Sedimentation
- Yard Piping & Electrical Power Distribution
- Chlorine Contact Tank & Effluent Pump Station Substructure
- COMNET - NCWRP
- Operations Building
- Influent Pump Station & Effluent Pump Station Completion
- Translucent Panels
- Chemical Building

VI. COST ESTIMATION

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## H.2 Various Pipeline Construction Projects

Eight construction contracts have been awarded on Pipelines projects for the total amount of \$52,779,000.

- South Metropolitan Interceptor Initial Repair
- South Metropolitan Phase 102" Rehabilitation
- Pump Station 65 - Expansion & Force Main
- Mitigation/Revegetation Soreno Valley Pipelines
- Carmel Valley Trunk Sewer Replacement / Sorrento Valley Road Pipeline Relocation
- North City Tunnel Connector
- North Metropolitan Interceptor Phase I
- Pump Station No. 1 Repair

## H.3 Northern Sludge Processing Facility ("NSPF")

Three construction contracts have been awarded on NSPF project for the total amount of \$70,100,000.

- Site Development
- Yard Piping & Power Distribution
- Centrifuge/Dewatered Biosolids Storage Facility

## H.4 Point Loma Plant

Eleven construction contracts have been awarded at the Point Loma Plant for the total amount of \$66,300,000.

- Air Hoist Replacement at Sewer Pump Station Nos. 1 & 2
- Motor Control Centers 4,6 and 6A Relocation
- Gas Utilization Facility (GUF) Piping Replacement
- Point Loma - Sedimentation Basins 11 & 12
- South Digester Boiler Replacement
- Pt. Loma - Digester N1 and N2 Roof & Heating System
- Pump Procurement
- 12" Sludge Line to Sunset Cliffs
- Point Loma Outfall Extension
- South Effluent Ocean Outfall Channel
- FIRP Pump Station

With the exception of 5 out of 34 projects, the projects listed above were bid substantially under the final engineer's estimates. Of those five contracts, four were in the range of \$100,000 to \$500,000 higher than the CIP budget, and one, the Carmel/Sorrento Valley Pipelines, was \$2 million higher than the CIP budget. Overall, total bid costs were 21% lower than the CIP budget. The San Diego area enjoys an excellent bidding climate and the current economic conditions have contributed to lower bids.

VI. COST ESTIMATION

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From the estimator's standpoint, such occurrences cannot be predicted nor accounted for in the estimates. Some projects will be bid lower than the engineer's estimate, some, inevitably, will exceed the estimate. Overall, in view of the conditions known and anticipated by the MWWD, the Team believes that the current cost estimates are reasonable and conservative.

**I. Change Orders**

The Construction Contract Documents - General Conditions, Section 00700, Articles 10, 11, 12 and 16 - establish guidelines regarding changes in the work and resolution of disputes. The Contract Documents stipulate that the format of Cost Proposals received from the Contractor "shall detail all applicable elements of cost."

The CM developed procedures for processing change orders and implemented a sophisticated tracking system which monitors the status of all the changes from Request for Change to the final execution of the Change Order. It reports the number and amount of approved and executed change orders. It also shows the status and amount for each individual Change Order awaiting City action. All Requests for Proposals are categorized using the following status identifiers:

- Awaiting Change Order Preparation
- Awaiting Negotiation
- Awaiting Contractor Proposal
- Awaiting Development

Additionally, all Requests for Change ("RFC") that are in dispute and RFC's under consideration are part of this extensive tracking effort. The Team's review of several change orders selected at random (Table VI-5) revealed that the CM follows a consistent and systematic approach to change orders, from summary overview, through justification of entitlement. Records of negotiations are detailed, describing reasons for the cost amounts agreed to for each line item in the estimate. Supporting documents include: Contractor Cost Proposal with subcontractors' backup, Engineer's Fair Cost Estimate, marked up drawings, corresponding specifications, and relevant documentation, in chronological order. The Team considers these procedures to be reasonable and efficient.

**J. Repair and Replacement Projects (Water Utilities Department)**

In addition to new construction costs discussed in the previous paragraphs, a portion of the Program includes allocations for repair and replacement of existing sewer lines and pump stations contained in the Municipal System CIP.

Approximately \$396 million of the projected appropriations included in the CIP are for projects managed by the Water Utilities Department rather than the MWWD. Of that amount, approximately \$186 million of the appropriations are for annual allocations for sewer main replacements and sewer pump station restoration. These are routine appropriations which are based on historical experience. The budget amounts have been adjusted based on actual expenditures in the previous years. The method of budgeting for this allocation is appropriate.

VI. COST ESTIMATION

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**K. Conclusion**

The combination of using the *Means* and *Richardson* databases, the estimator's judgement, and vendor verifications to develop construction cost estimates during design is reasonable.

The 29.86% General Allowance for engineering, construction management, legal and administrative costs incorporated into the program CIP Budget of the various projects is reasonable and is based, in part, on historical data.

The Contingencies and Field Order Allowances currently used are reasonable and should be sufficient to cover normal anticipated, but unquantifiable, items and construction changes.

The construction estimates generated during the design stage are based upon sound estimating methodology. It is possible that actual bid prices for future projects will be higher or lower than estimated. The City enjoys an excellent bidding climate at the present time, as is evident by the bid results during the past two years. Many individual projects have been awarded at prices substantially lower than their estimated construction cost. In general, the Team concludes that the total costs estimated at this time for the Program are reasonable for the scope and magnitude of the program.

VI. COST ESTIMATION

Table VI-1

**Financial Summary for Funds No. 41506, 41508 and 41509**

AS REPORTED IN FINANCIAL SUMMARY FOR MWW D PROJECTS, PROGRAM MONTHLY STATUS REPORT (JUNE 1995)

PHASE	A		B		C		D		E
	CIP BUDGET	%	TOTAL COST FORECAST	%	VARIANCE +/- (A - B)	%	EXPENDITURES TO DATE	%	COST % COMPLETE (D / B)
Program Administration	\$223,230,967	15.07%	\$209,747,168	14.35%	\$13,483,799	6.43%	\$118,051,884	29.43%	56.28%
Land Acquisition	\$29,999,299	2.02%	\$28,927,530	1.98%	\$1,071,769	3.71%	\$18,029,057	4.49%	62.32%
Design Engineering	\$138,195,108	9.33%	\$139,796,902	9.56%	(\$1,601,794)	-1.15%	\$77,526,470	19.33%	55.46%
Permits & Fees	\$11,121,161	0.75%	\$11,200,037	0.77%	(\$78,876)	-0.70%	\$557,994	0.14%	4.98%
Construction Management	\$68,621,189	4.63%	\$75,684,011	5.18%	(\$7,062,822)	-9.33%	\$21,989,503	5.48%	29.05%
Construction	\$1,010,507,742	68.20%	\$949,996,473	64.99%	\$60,511,269	6.37%	\$164,951,777	41.12%	17.36%
Contingency	\$0	0.00%	\$46,447,284	3.18%	(\$46,447,284)	-100.00%	\$0	0.00%	0.00%
<b>Program Totals</b>	<b>\$1,481,675,466</b>	<b>100.00%</b>	<b>\$1,461,799,405</b>	<b>100.00%</b>	<b>\$19,876,061</b>	<b>1.36%</b>	<b>\$401,106,685</b>	<b>100.00%</b>	<b>27.44%</b>

VI. COST ESTIMATION

Table VI-1A

**General Allowances/  
Budget & Forecast Comparison for Funds No. 41506, 41508 and 41509**

AS REPORTED IN FINANCIAL SUMMARY FOR MWW D PROJECTS, PROGRAM MONTHLY STATUS REPORT (JUNE 1995)

PHASE	A		B		C		D
	CIP BUDGET	%	TOTAL COST FORECAST (F/C)	%	EXPEND. TO DATE (ETD) FORECAST TO COMPLETE (FTC)	% EDT % FTC	
Program Administration	\$223,230,967	15.07%	\$209,747,168	14.35%	\$118,051,884	8.08%	56.28%
Design Engineering	\$138,195,108	9.33%	\$139,796,902	9.56%	\$91,695,284	6.27%	55.46%
Permits & Fees	\$11,121,161	0.75%	\$11,200,037	0.77%	\$77,526,470	5.30%	4.98%
Construction Management	\$68,621,189	4.63%	\$75,684,011	5.18%	\$62,270,432	4.26%	29.05%
Program Sub-Totals	\$441,168,425	29.77%	\$436,428,118	29.86%	\$557,994	0.04%	49.98%
Land Acquisition	\$29,999,299	2.02%	\$28,927,530	1.98%	\$10,642,043	0.73%	62.32%
Construction	\$1,010,507,742	68.20%	\$949,996,473	64.99%	\$21,989,503	1.50%	17.36%
Contingency	\$0	0.00%	\$46,447,284	3.18%	\$53,694,508	3.67%	0.00%
Program Sub-Totals	\$1,040,507,041	70.23%	\$1,025,371,287	70.14%	\$218,125,851	14.92%	17.85%
Program Totals	\$1,481,675,466	100.00%	\$1,461,799,405	100.00%	\$218,302,267	14.93%	27.44%

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VI. COST ESTIMATION

Table VI-2

**Financial Summary by Project for Funds No. 41506, 41508 and 41509**

AS REPORTED IN MWWD SUMMARY BUDGET/COST REPORT, PROGRAM MONTHLY STATUS REPORT (JUNE 1995)

PHASE	A		B		C		D		E
	CIP BUDGET	%	TOTAL COST FORECAST	%	VARIANCE +/- (A - B)	%	EXPENDITURES TO DATE	%	COST % COMPLETE (D / B)
<b>3. North City Water Reclamation Plant</b>									
North City Water Reclamation Plant	\$191,155,996	12.90%	\$191,460,126	10.30%	(\$304,130)	-0.16%	\$91,821,754	22.89%	47.96%
<b>Sub-Total: North City Reclamation Plant</b>	<b>\$191,155,996</b>	<b>12.90%</b>	<b>\$191,460,126</b>	<b>10.30%</b>	<b>(\$304,130)</b>	<b>-0.16%</b>	<b>\$91,821,754</b>	<b>22.89%</b>	<b>47.96%</b>
<b>4. Northern Biosolids Processing Project</b>									
Northern Sludge Processing Facility	\$212,661,487	14.35%	\$201,240,099	10.83%	\$11,421,388	5.68%	\$17,932,193	4.47%	8.91%
Fiesta Island Replacement Project Pump Station	\$42,698,745	2.88%	\$40,319,737	2.17%	\$2,379,008	5.90%	\$21,273,584	5.30%	52.76%
FIRP Phase II Digested Sludge/Centrates Pipes	\$30,553,436	2.06%	\$30,336,725	1.63%	\$216,711	0.71%	\$1,865,597	0.47%	6.15%
North City Raw Sludge and Water Pipelines	\$21,510,886	1.45%	\$21,516,569	1.16%	(\$5,683)	-0.03%	\$1,504,714	0.38%	6.99%
<b>Sub-Total: Northern Biosolids Processing Project</b>	<b>\$307,424,554</b>	<b>20.75%</b>	<b>\$293,413,130</b>	<b>15.79%</b>	<b>\$14,011,424</b>	<b>4.78%</b>	<b>\$42,576,088</b>	<b>10.61%</b>	<b>14.51%</b>
<b>5. South Bay Projects</b>									
<b>a. Water Reclamation Plant &amp; Dairy Mart Road Bridge</b>									
South Bay Water Reclamation Plant	\$79,786,866	5.38%	\$79,793,220	4.29%	(\$6,354)	-0.01%	\$429,802	0.11%	0.54%
Dairy Mart Road & Bridge Improvements	\$8,903,403	0.60%	\$8,903,403	0.48%	\$0	0.00%	\$141,667	0.04%	1.59%
<b>b. Sewer Conveyance System</b>									
South Bay Water Reclamation Sewer & PS	\$26,904,861	1.82%	\$26,905,362	1.45%	(\$501)	-0.002%	\$67,913	0.02%	0.25%
<b>c. Outfalls</b>									
South Bay Ocean Outfall	\$182,763,041	12.33%	\$182,880,728	9.84%	(\$117,687)	-0.06%	\$4,347,970	1.08%	2.38%
South Bay Land Outfall	\$20,642,133	1.39%	\$20,487,346	1.10%	\$154,787	0.76%	\$18,371,158	4.58%	89.67%
<b>Sub-Total: South Bay Projects</b>	<b>\$319,000,304</b>	<b>21.53%</b>	<b>\$318,970,059</b>	<b>17.16%</b>	<b>\$30,245</b>	<b>0.01%</b>	<b>\$23,358,510</b>	<b>5.82%</b>	<b>7.32%</b>



VI. COST ESTIMATION

Table VI-2

**Financial Summary by Project for Funds No. 41506, 41508 and 41509**

AS REPORTED IN MWW D SUMMARY BUDGET/COST REPORT, PROGRAM MONTHLY STATUS REPORT (JUNE 1995)

PHASE	A		B		C		D		E
	CIP BUDGET	%	TOTAL COST FORECAST	%	VARIANCE +/- (A - B)	%	EXPENDITURES TO DATE	%	COST % COMPLETE (D / B)
The Metropolitan Wastewater System CIP (Funds 41508 and 41509)									
1. Point Loma Plant Upgrade									
South Effluent Outfall Channel	\$21,535,073	1.45%	\$21,549,994	1.16%	(\$14,921)	-0.07%	\$16,394,819	4.09%	76.08%
North Operation Building	\$3,858,995	0.26%	\$3,858,995	0.21%	\$0	0.00%	\$34,665	0.01%	0.90%
Power Generation and Distribution Upgrade	\$32,449,601	2.19%	\$32,449,601	1.75%	\$0	0.00%	\$89,501	0.02%	0.28%
Chemical Feed System Upgrade	\$2,162,422	0.15%	\$2,169,933	0.12%	(\$7,511)	-0.35%	\$57,812	0.01%	2.66%
North Shoreline Protection Improvements	\$1,603,555	0.11%	\$1,603,555	0.09%	\$0	0.00%	\$0	0.00%	0.00%
Annual Allocation Plant & Related Facilities	\$10,947,464	0.74%	\$10,947,464	0.59%	\$0	0.00%	\$526,090	0.13%	4.81%
Sedimentation Basins 11 & 12	\$8,554,383	0.58%	\$8,643,070	0.47%	(\$88,687)	-1.03%	\$6,931,475	1.73%	80.20%
Plant Access Road	\$413,013	0.03%	\$414,873	0.02%	(\$1,860)	-0.45%	\$165,199	0.04%	39.82%
Digesters N1 & N2 Roofs and Heating Systems	\$13,417,400	0.91%	\$14,570,137	0.78%	(\$1,152,737)	-7.91%	\$3,198,864	0.80%	21.95%
Scum Removal Systems	\$5,629,866	0.38%	\$5,685,406	0.31%	(\$55,540)	-0.98%	\$60,882	0.02%	1.07%
Headworks, Odor Control & Grit Processing Facility	\$40,818,995	2.75%	\$40,825,020	2.20%	(\$6,025)	-0.01%	\$95,897	0.02%	0.23%
Water Tank and Pipeline	\$3,548,022	0.24%	\$3,548,659	0.19%	(\$637)	-0.02%	\$200,462	0.05%	5.65%
Digester Facility Upgrade & Expansion	\$53,229,089	3.59%	\$51,189,498	2.75%	\$2,039,591	3.98%	\$1,901,617	0.47%	3.71%
Inactive Point Loma Region Projects	\$14,000	0.001%	\$11,387	0.001%	\$2,613	22.95%	\$11,988	0.003%	105.28%
Sub-Total: Point Loma Plant Upgrade	\$198,181,878	13.38%	\$197,467,592	10.63%	\$714,286	0.36%	\$29,669,271	7.40%	15.02%
2. Point Loma Outfalls									
SOP Compliance Phase II	\$63,969,918	4.32%	\$65,158,940	3.51%	(\$1,189,022)	-1.82%	\$63,842,875	15.92%	97.98%
Point Loma Tunnel Outfall	\$14,023,283	0.95%	\$14,272,960	0.77%	(\$249,677)	-1.75%	\$13,391,282	3.34%	93.82%
Sub-Total: Point Loma Outfalls	\$77,993,201	5.26%	\$79,431,900	4.27%	(\$1,438,699)	-1.81%	\$77,234,157	19.26%	97.23%

VI. COST ESTIMATION

Table VI-2

**Financial Summary by Project for Funds No. 41506, 41508 and 41509**

AS REPORTED IN MWWD SUMMARY BUDGET/COST REPORT, PROGRAM MONTHLY STATUS REPORT (JUNE 1995)

PHASE	A CIP BUDGET		B TOTAL COST FORECAST		C VARIANCE +/- (A - B)		D EXPENDITURES TO DATE		E COST % COMPLETE (D / B)	
		%		%		%		%		
<b>6. Major Interceptors (North and South)</b>										
North City Tunnel Connector	\$12,871,502	0.87%	\$14,744,701	0.79%	(\$1,873,199)	-12.70%	\$1,850,810	0.46%	12.55%	
Rose Canyon Trunk Sewer-MWWD Portion	\$12,168,826	0.82%	\$12,168,826	0.65%	\$0	0.00%	\$5,977,461	1.49%	49.12%	
North Metro Interceptor	\$68,088,749	4.60%	\$67,792,253	3.65%	\$296,496	0.44%	\$5,658,387	1.41%	8.35%	
South Metro Rehabilitation	\$19,252,288	1.30%	\$19,273,755	1.04%	(\$21,467)	-0.11%	\$2,490,190	0.62%	12.92%	
Force Main 1 & 2 Sludge Gates	\$2,524,209	0.17%	\$2,524,209	0.14%	\$0	0.00%	\$51,818	0.01%	2.05%	
<b>Sub-Total: Major Interceptors</b>	<b>\$114,905,574</b>	<b>7.76%</b>	<b>\$116,503,744</b>	<b>6.27%</b>	<b>(\$1,598,170)</b>	<b>-1.37%</b>	<b>\$16,028,666</b>	<b>4.00%</b>	<b>13.76%</b>	
<b>7. Mission Valley Water Reclamation Plant</b>										
Mission Valley Water Reclamation Plant	\$670,778	0.05%	\$670,778	0.04%	\$0	0.00%	\$670,778	0.17%	100.00%	
<b>Sub-Total: Mission Valley Water Reclamation Plant</b>	<b>\$670,778</b>	<b>0.05%</b>	<b>\$670,778</b>	<b>0.04%</b>	<b>\$0</b>	<b>0.00%</b>	<b>\$670,778</b>	<b>0.17%</b>	<b>100.00%</b>	
<b>8. Other Metropolitan System Projects</b>										
Inactive Northern Region Projects	\$11,303,472	0.76%	\$9,895,821	0.53%	\$1,407,651	14.22%	\$7,735,639	1.93%	78.17%	
Sludge & Biosolids Management Facility	\$981,700	0.06%	\$966,618	0.05%	(\$15,082)	-1.51%	\$116,980	0.03%	12.10%	
Biosolids Demonstration Project #1	\$180,270	0.01%	\$180,270	0.01%	\$0	0.00%	\$0	0.00%	0.00%	
Inactive Biosolids Processing Projects	\$2,516,094	0.17%	\$2,829,066	0.15%	(\$312,972)	-11.06%	\$2,829,066	0.71%	100.00%	
Inactive South Bay Region Projects	\$300,307	0.02%	\$301,019	0.02%	(\$712)	-0.24%	\$292,887	0.07%	97.30%	
Wastewater Operations Mgmt Network	\$29,502,306	1.99%	\$29,822,108	1.60%	(\$319,802)	-1.07%	\$2,767,652	0.69%	9.28%	
Metro Systems Operations Center	\$8,109,829	0.55%	\$8,578,668	0.46%	(\$468,839)	-5.47%	\$7,442,226	1.86%	86.75%	
Inactive Program Projects	\$30,907,765	2.09%	\$30,871,053	1.66%	\$36,712	0.12%	\$30,961,699	7.72%	100.29%	
Program Studies & Engineering Support	\$104,625,118	7.06%	\$96,606,153	5.20%	\$8,018,965	8.30%	\$54,413,547	13.57%	56.33%	
Trucked Liquid Waste Disposal Site	\$138,080	0.01%	\$143,614	0.01%	(\$5,534)	-3.85%	\$58,048	0.01%	40.42%	
<b>Sub-Total: Other Metropolitan System Projects</b>	<b>\$188,544,941</b>	<b>12.73%</b>	<b>\$180,194,390</b>	<b>9.70%</b>	<b>\$8,350,551</b>	<b>4.63%</b>	<b>\$106,617,744</b>	<b>26.58%</b>	<b>59.17%</b>	
<b>Sub-Total: The Metropolitan Wastewater System CIP (Funds 41508 and 41509)</b>	<b>\$1,397,877,226</b>	<b>94.34%</b>	<b>\$1,378,111,719</b>	<b>74.15%</b>	<b>\$19,765,507</b>	<b>1.43%</b>	<b>\$387,976,968</b>	<b>96.73%</b>	<b>28.15%</b>	

VI. COST ESTIMATION

Table VI-2

**Financial Summary by Project for Funds No. 41506, 41508 and 41509**

AS REPORTED IN MWWD SUMMARY BUDGET/COST REPORT, PROGRAM MONTHLY STATUS REPORT (JUNE 1995)

PHASE	A		B		C		D		E
	CIP BUDGET	%	TOTAL COST FORECAST	%	VARIANCE +/- (A - B)	%	EXPENDITURES TO DATE	%	COST % COMPLETE (D / B)
<b>The Municipal Wastewater System CIP (Fund 41506)</b>									
<b>1. Projects Managed by MWWD</b>									
Penasquitos Trunk Sewer Relief	\$57,095,642	3.85%	\$56,482,824	3.04%	\$612,818	1.08%	\$3,725,571	0.93%	6.60%
Pump Station 65 - Expansion & Force Main	\$18,946,060	1.28%	\$19,124,175	1.03%	(\$178,115)	-0.93%	\$4,912,521	1.22%	25.69%
Carmel Valley Trunk Sewer Replacement	\$7,113,150	0.48%	\$7,437,299	0.40%	(\$324,149)	-4.36%	\$4,491,622	1.12%	60.39%
Pump Station 64 - HPO Injection	\$643,388	0.04%	\$643,388	0.03%	\$0	0.00%	\$0	0.00%	0.00%
<b>Sub-Total: Projects Managed by MWWD</b>	<b>\$83,798,240</b>	<b>5.66%</b>	<b>\$83,687,686</b>	<b>4.50%</b>	<b>\$110,554</b>	<b>0.13%</b>	<b>\$13,129,714</b>	<b>3.27%</b>	<b>15.69%</b>
<b>2. Projects Managed by the Water Utilities Department</b>									
Annual Allocation - As needed Consultant Services			\$4,000,000	0.22%					
Annual Allocation - Freeway Relocation			\$558,400	0.03%					
Annual Allocation - Sewer Main Replacements			\$167,070,100	8.99%					
Annual Allocation - Sewer Pump Station Restorations			\$20,000,000	1.08%					
Carmel Valley Trunk Sewer - East of I-5			\$5,897,291	0.32%					
Catalina Boulevard Trunk Sewer			\$2,134,455	0.11%					
Chollas Valley Trunk Sewer			\$9,836,051	0.53%					
East Mission Gorge Trunk Sewer Rehabilitation			\$18,185,960	0.98%					
Home Avenue Trunk Sewer			\$4,547,679	0.24%					
North Mission Valley Interceptor Sewer - Phase II			\$3,315,269	0.18%					
San Pasqual Aquatic Treatment Facility - Phase II			\$17,181,009	0.92%					
Sewer Pump Station No. 24 and 26			\$3,428,119	0.18%					
Telemetry Control System - SCADA			\$2,396,397	0.13%					
40th Street / I-15 Utility Relocation			\$445,410	0.02%					
Long Term Projected Sewer Projects			\$137,716,754	7.41%					
<b>Sub-Total: Projects Managed by the Water Utilities Department</b>			<b>\$396,712,894</b>	<b>21.35%</b>					
<b>Sub-Total: The Municipal Wastewater System CIP (Fund 41506)</b>	<b>\$83,798,240</b>	<b>5.66%</b>	<b>\$480,400,580</b>	<b>25.85%</b>	<b>\$110,554</b>	<b>-82.56%</b>	<b>\$13,129,714</b>	<b>3.27%</b>	<b>2.73%</b>
<b>TOTAL ALL PROJECTS</b>	<b>\$1,481,675,466</b>	<b>100.00%</b>	<b>\$1,858,512,299</b>	<b>100.00%</b>	<b>\$19,876,061</b>	<b>-20.28%</b>	<b>\$401,106,682</b>	<b>100.00%</b>	<b>21.58%</b>

VI. COST ESTIMATION

Table VI-3

**Construction Cost Estimates Reviewed**

No.	Description Project / Estimate	Dated	Amount \$	Estimate Level	T	P	G	C	Accuracy %	Labor	Mat'l	Equip	ENR Cost index
1	Scripps Ranch Blvd/I-15 Subsystem	01/09/95	\$4,904,030	30%	8.25%	10%	5%	15%	120/90	M, R, E	M,R,V	M,R,V	6532
2	North City Raw Sludge & WTR Pipelines Part 2	04/17/95	\$13,974,874	90%	7.25%	10%		5%	120/90	M, R, E	I,V	M,R,V	6560
3	East Potrtal Forcemain Isolation Structure	07/05/95	\$1,167,040	100%	7.25%	10%		10%	115/95	M, R, E	M95,E	M,R,V	6523
4	Miramar Road Subsystem - Reclamed Water Distribution System	08/10/94	\$8,718,146	90%	7.75%	10%	none	5%	120/90	M, R, E	V,I	M,R,V	6560
5	University City Subsystem, Backbone System	07/07/95	\$1,787,804	60%	7.00%	10%	none	15%	120/90	M, R, E	M,R,V	M,R,V	6516
6	FIRP/NSPF, Energy Bldg. / Wastewater Pump Station	10/21/94	\$8,000,880	90%	8.25%	10%	5%	10%		M, R, E	M,R,V	M,R,V	6360
7	FIRP/NSPF, Yard Piping & Power Distribution	09/22/94	\$24,524,521	Final	8.25%	10%	5%	10%	115/95	M, R, E	M,R,V	M,R,V	6360
8	FIRP/NSPF, Point Loma Sludge Pump Station	11/23/94	\$14,614,124	Final	8.25%	10%	5%	10%	115/95	M, R, E	M,R,V	M,R,V	6360
9	FIRP/NSPF, Site Development	05/17/94	\$5,394,550	Final	8.25%	10%	5%	5%	115/95	M, R, E	M,R,V	M,R,V	6360
10	North Metro Interceptor Project, Phase 2	06/28/95	\$14,796,431	Final		10%		10%	110/90	E	M,R,V	M,R,V	
11	North City Water Reclamation Plant	12/23/92	\$161,285,763	90%	8.25%	5-10	5%	11%	130/85	M, R, E			6334
12	North City Water Reclamation Plant, Facility 05 - Headworks	03/12/95	\$8,985,924	100%	8.25%	5-10		none					
13	North City Water Reclamation Plant, Facility 15 - Aeration Basins & Blower Gallery	03/12/95	\$17,696,047	100%	8.25%	5-10%		none			V		

LEGEND:

T = State & Local Tax  
P = Profit  
G = GC Mark Up on S/C  
C = Contingency  
M = Means

R = Richardson  
E = Estimator's judgement  
V = Vendor  
N/U = Not Used  
I = Industry Guides

VI. COST ESTIMATION

Table VI-4

**Construction Bid Results**

AS REPORTED IN CONSTRUCTION AWARD REPORT, PROGRAM MONTHLY STATUS REPORT (JUNE 1995)

#	PROJECT	A	B	C		D	E	REMARKS
		CIP BUDGET W/O CONTINGENCY	LOW BID	VARIANCE \$ (A - B)	% (C/A)	FIELD (FA) ALLOWANCE	% FA (D/B-D)	
OPENED BIDS								
1	NCWRP - Initial Site Preparation	\$4,600,000	\$3,481,000	\$1,119,000	24.33%			
2	South Metro Rehabilitation - Phase I	\$1,100,000	\$794,000	\$306,000	27.82%			
3	NCWRP - Influent PS Substructure	\$5,600,000	\$5,710,000	(\$110,000)	-1.96%			
4	Fiesta Island Facilities Improvements	\$1,700,000	\$1,383,000	\$317,000	18.65%			
5	Fiesta Island Waterline	\$300,000	\$159,000	\$141,000	47.00%			
6	NCWRP - Aeration Facility	\$19,800,000	\$16,881,000	\$2,919,000	14.74%			
7	NCWRP - Sec. Clarifiers/Tertiary	\$23,400,000	\$18,210,000	\$5,190,000	22.18%			
8	PLWTR - Sed. Basins 11 & 12	\$8,356,836	\$6,100,000	\$2,256,836	27.01%			
9	NCWRP - Headworks & Sed. Basins	\$19,800,000	\$17,947,639	\$1,852,361	9.36%			
10	NCWRP - Chlorine Contact/Effluent PS	\$4,607,304	\$3,374,007	\$1,233,297	26.77%			
11	NCWRP - Yard Piping/Electrical Dist.	\$15,510,583	\$15,383,926	\$126,657	0.82%			
12	Carmel/Sorrento Valley Pipelines	\$4,712,840	\$6,680,070	(\$1,967,230)	-41.74%			
13	PLWTR - South Digester Boiler Replace	\$410,000	\$523,411	(\$113,411)	-27.66%			
14	VW Oper. Mgmt. Network (COMNET)	\$17,849,006	\$11,463,421	\$6,385,585	35.78%			
15	NCWRP - Instrumentation & Control	\$6,469,093	\$2,584,971	\$3,884,122	60.04%			
16	Pump Station 65 Expansion/Pipelines	\$13,761,164	\$12,245,350	\$1,515,814	11.02%			
17	NCWRP - Operations Building	\$5,806,780	\$4,689,000	\$1,117,780	19.25%			
18	South Metro Rehabilitation - Phase II	\$1,200,000	\$770,405	\$429,595	35.80%			
19	FIRP/NSPF Site Development	\$16,105,803	\$2,197,540	\$13,908,263	86.36%			
20	Point Loma Digesters N1 & N2	\$10,806,168	\$8,825,364	\$1,980,804	18.33%			

VI. COST ESTIMATION

Table VI-4

**Construction Bid Results**

AS REPORTED IN CONSTRUCTION AWARD REPORT, PROGRAM MONTHLY STATUS REPORT (JUNE 1995)

#	PROJECT	A	B	C		D	E	REMARKS
		CIP BUDGET W/O CONTINGENCY	LOW BID	VARIANCE \$ (A - B)	% (C/A)	FIELD (FA) ALLOWANCE	% FA (D/B-D)	
OPENED BIDS								
(continue)								
21	NCWRP - Chemical Building	\$5,442,895	\$4,663,000	\$779,895	14.33%			
22	FIRP Pump Station Pump Procurement	\$2,000,000	\$2,404,000	(\$404,000)	-20.20%			
23	FIRP/NSPF Yard Piping/Electrical Dist.	\$31,689,285	\$19,538,767	\$12,150,518	38.34%	\$270,000	1.40%	
24	North City Tunnel Connector	\$10,908,007	\$7,989,000	\$2,919,007	26.76%			
25	NCWRP - Influent PS/Effluent PS Comp.	\$14,561,236	\$8,839,500	\$5,721,736	39.29%			
26	North Metro Interceptor - Phase I	\$39,366,475	\$22,969,090	\$16,397,385	41.65%	\$720,000	3.24%	
27	Pump Station 65 - Wetlands Mitigation	\$2,100,000	\$1,181,810	\$918,190	43.72%			
28	Pump Station #1 12" Drain Repair	\$160,000	\$149,340	\$10,660	6.66%			
29	NCWRP - Transluent Panels	\$913,000	\$1,119,883	(\$206,883)	-22.66%			
30	FIRP/NSPF Certifuge Procurement	\$19,829,036	\$7,650,000	\$12,179,036	61.42%			
31	FIRP Pump Station At Point Loma	\$22,466,455	\$10,667,000	\$11,799,455	52.52%	\$705,000	7.08%	
32	Pt. Loma - Plant Access Road		In FIRP Sludge P	S. Contract				
33	North City Raw Sludge Pump Station	\$2,658,726	\$2,391,500	\$267,226	10.05%	\$150,000	6.69%	
34	North Metro Interceptor Revegetation	\$2,000,000	\$275,000	\$1,725,000	86.25%			
35	FIRP/NSPF Certifuge Facility	\$51,835,832	\$49,424,000	\$2,411,832	4.65%	\$120,000	0.24%	
36	FIRP/NSPF Chemical Building	\$11,370,810	\$11,051,400	\$319,410	2.81%	\$120,000	1.10%	
37	NCWRP - Flow Equaliz./Intermedlate PS	\$8,729,910	\$8,550,513	\$179,397	2.05%	\$300,000	3.64%	
38	Penasquitos Trunk Sewer - Pipeline	\$27,553,178	\$21,475,106	\$6,078,072	22.06%	\$1,700,000	8.60%	
39	South Bay Ocean Outfall: Tunnel Pkg 2	\$89,234,728	\$88,285,000	\$949,728	1.06%	\$4,180,000	4.97%	
40	FIRP/NSPF Digester Complex	\$23,579,773	\$23,000,039	\$579,734	2.46%	\$120,000	0.52%	
TOTAL OPENED BIDS		\$548,294,923	\$431,027,052	\$117,267,871	21.39%			

VI. COST ESTIMATION

Table VI-4

**Construction Bid Results**

AS REPORTED IN CONSTRUCTION AWARD REPORT, PROGRAM MONTHLY STATUS REPORT (JUNE 1995)								
#	PROJECT	A	B	C		D	E	REMARKS
		CIP BUDGET W/O CONTINGENCY	LOW BID	VARIANCE \$ (A - B)	% (C/A)	FIELD (FA) ALLOWANCE	% FA (D/B-D)	
PROJECTS ON HOLD								
41	East Mission Bay Effl. Pipeline - South	\$5,305,370	\$5,014,075	\$291,295	5.49%			
42	East Mission Bay Effl. Pipeline - North	\$5,305,370	\$5,363,450	(\$58,080)	-1.09%			
TOTAL PROJECTS ON HOLD		\$10,610,740	\$10,377,525	\$233,215	2.20%			
TOTAL OPENED BIDS & PROJ. ON HOLD		\$558,905,663	\$441,404,577	\$117,501,086	21.02%			

VI. COST ESTIMATION

Table VI-5

**Change Orders Reviewed**

CONTRACTOR & C.O. #	RFP #	CONTRACTOR'S PROPOSAL	SVERDRUP ICF KAISER	NEGOTIATED AMOUNT	VARIANCE	
		1	2	3	\$	%
					4=3-1	
<b><u>MINGUS CONSTRUCTORS, INC.</u></b>						
<b>INFLUENT PUMP STATION SUBSTRUCTURE</b>						
C.O. No.16	RFP-40	\$5,048.75	\$3,713.16	\$4,949.00	(\$99.75)	-2.02%
	RFP-46	\$3,690.25	\$2,298.12	\$3,690.00	(\$0.25)	-0.01%
	RFP-49	\$2,044.81	\$2,705.40	\$2,044.00	(\$0.81)	-0.04%
<b>CHANGE ORDER 16: SUBTOTAL</b>		<b>\$10,783.81</b>	<b>\$8,716.68</b>	<b>\$10,683.00</b>	<b>(\$100.81)</b>	<b>-0.94%</b>
<b><u>TAYLOR BALL</u></b>						
<b>OPERATING BUILDING</b>						
C.O. No.3	RFP-7	\$10,392.00	\$12,454.00	\$10,287.00	(\$105.00)	-1.02%
	RFP-8	\$3,852.00	\$2,208.00	\$3,035.00	(\$817.00)	-26.92%
<b>CHANGE ORDER 3: SUBTOTAL</b>		<b>\$14,244.00</b>	<b>\$14,662.00</b>	<b>\$13,322.00</b>	<b>(\$922.00)</b>	<b>-6.92%</b>
<b><u>HUNTER CORPORATION</u></b>						
<b>CHLORINE CONTACT TANKS &amp; EFFLUENT PUMP STATION SUBSTRUCTURE</b>						
C.O. No.3	RFP-3	(\$729.00)	(\$5,222.00)	(\$879.00)	(\$150.00)	17.06%
	RFP-5	\$2,540.00	\$2,138.00	\$2,540.00	\$0.00	0.00%
	RFP-6	\$16,025.00	\$18,961.00	\$16,025.00	\$0.00	0.00%
	RFP-7	\$12,663.00	\$11,028.00	\$12,663.00	\$0.00	0.00%
	RFP-8	\$3,214.00	\$5,303.00	\$4,789.00	\$1,575.00	32.89%
<b>SUBTOTAL (1)</b>		<b>\$33,713.00</b>	<b>\$32,208.00</b>	<b>\$35,138.00</b>	<b>\$1,425.00</b>	<b>4.06%</b>
Bid Item 5 - Allowance for Unknown Utilities		(\$50,000.00)	(\$50,000.00)	(\$50,000.00)		
Bid Item 6 - Allowance for Site Maintenance		(\$50,000.00)	(\$50,000.00)	(\$50,000.00)		
Bid Item 7 - Allowance for Partnering		(\$10,000.00)	(\$10,000.00)	(\$10,000.00)		
<b>CHANGE ORDER 3: SUBTOTAL</b>		<b>(\$76,287.00)</b>	<b>(\$77,792.00)</b>	<b>(\$74,862.00)</b>	<b>\$1,425.00</b>	<b>-1.90%</b>
<b>GRAND TOTAL (REVIEWED )</b>		<b>(\$51,474.19)</b>	<b>(\$54,413.32)</b>	<b>(\$50,857.00)</b>	<b>\$402.19</b>	<b>-0.79%</b>

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## VII. OPERATIONS AND MAINTENANCE

### A. Introduction

The Team's evaluation focused on current and projected O&M costs of the Municipal System (officially called the Wastewater Collection Division of the Water Utilities Department) and the MWWD as proposed in the Program. The Team reviewed Fiscal Year ("FY") 1995 (which ended June 30, 1995) and the proposed FY 1996 budgets and staffing for these facilities and assessed their adequacy and reasonableness. The Team also performed a separate derivation of projected future staffing and budget levels for FY 2003, based on data provided by the City. These projections were compared to the figures given in the Preliminary August 1995 Financing Plan, and were also evaluated for adequacy and reasonableness. This comparison is summarized in Table VII-1.

In order to assist in the evaluation of adequacy and reasonableness, the Team compared O&M budget and staffing projections to wastewater facilities in cities of comparable size to the City of San Diego. Telephone surveys were conducted to obtain comparative data for sewer systems and treatment facilities in the western United States. Information was collected on primary and secondary treatment plants with design capacities between 18 and 188 million gallons per day ("MGD") and reclamation plants with design capacities between 8 and 62.5 MGD. Information was collected on the treatment processes used, staffing, and O&M costs for each of the plants. This information was used for comparison to the facilities proposed for future MWWD facilities and the Point Loma Plant modifications. A summary of the budget comparisons is presented in Table VII-2. A summary of staffing comparisons was also performed and is presented in Table VII-3.

A comparison of staffing estimates between the current Financing Plan and previous Financing Plans was performed. The comparison is summarized in Table VII-4 and is explained below.

### B. Point Loma Plant

#### B.1 EXISTING PLANT

The projected O&M costs for FY 1996 for operating the advanced primary treatment portion of the Point Loma Plant are \$19.15 million, based on the recently approved budget. These costs do not include the Gas Utilization Facility (proposed budget of \$1.6 million), the Hydroelectric Generation Facility (proposed budget of \$410,000), Division administration (proposed budget of \$17 million), nor biosolids dewatering and hauling (proposed budget of \$16.36 million).

The FY 1995 expenditures for the Point Loma Plant were also obtained from City Staff. The costs for operating the advanced primary treatment portion of the Point Loma Plant are compared to other facilities in Table VII-2. The FY 1995 budget for the advanced primary treatment portion of the plant was \$24.74 million with actual O&M expenditures of \$18.5 million. These figures also do not include the Gas Utilization Facility, the Hydroelectric Generation Facility, Division Administration, or biosolids dewatering and hauling. There were numerous costs

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savings at the Point Loma Plant in FY 1995, including substantial savings in chemical-related costs and personnel expenses. It is difficult to predict if these cost savings will also occur in FY 1996; however, the O&M budget for the Point Loma Plant has been reduced by almost \$5 million based on the actual cost experience for FY 1995.

Comparison of the actual expenditures for FY 1995 indicates that the Point Loma Plant operates at approximately \$275 per million gallons treated. This is slightly lower than the average of other facilities surveyed (see Table VII-2). The fact that the Point Loma Plant consists of advanced primary treatment only, while all other plants surveyed provide secondary treatment, explains some of the cost difference. Another prime factor is what is included in the cost expenditures from each facility. Data from Metropolitan Denver, Orange County, and San Francisco show very high personnel costs and staffing numbers, corresponding to the fact that all agency personnel are included in these numbers. The Phoenix plants, however, do not include any electricians or laboratory personnel who are provided by other departments.

A factor affecting overall cost is the capacity each facility is operating at in comparison to its design capacity. Each facility has a certain amount of cost involved regardless of actual flows. Overhead costs will decrease on a per million gallon (MG) basis as more flow goes through the facility. Since the Point Loma Plant is only operating at approximately 75 percent capacity, its fixed costs are relatively high, which keeps its unit costs closer to the other facilities' unit costs.

Staffing at the Point Loma Plant for FY 1995 is low on a personnel per MGD basis. However, since it is an advanced primary treatment facility, additional personnel for secondary treatment are not required. If the Point Loma Plant treated the same flow and provided secondary treatment, the number of operators and maintenance personnel might be, at a minimum, double the current number in order to adequately operate and maintain the extra processes. The number may also reflect the fact that laboratory or safety personnel are not included in the O&M staffing figures. Laboratory and Safety personnel are accounted for elsewhere in the Department's budget. The Los Angeles County reclamation plants also show very low personnel per MGD staffing; again because only O&M personnel were included in the staffing count.

## B.2 CURRENT PLANT MODIFICATIONS

The Program includes upgrading the Point Loma Plant to 240 MGD of advanced primary treated flow using ferric chloride and polymer addition to achieve no less than 80 percent removal of total suspended solids and 58 percent removal of the biochemical oxygen demand ( $BOD_5$ ) as specified by the Interim Order. The projected increase in O&M costs associated with this upgrade has been incorporated into future budget projections. As part of the Program, several major replacement and expansion projects will take place to increase the advanced primary treatment capabilities and capacity at the Point Loma Plant. As a result, portions of the Point Loma Plant are currently under construction or have just been completed. An example is the Point Loma South Effluent Outfall Channel, which is expected to be complete in late 1995. Other projects which are currently under construction, or will soon start, include the addition of

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the FIRP Pump Station, Sedimentation Basin Nos. 11 and 12, the COMNET System, and the cleaning and cover replacement of Digesters N1 and N2.

While these projects are significant additions to the plant, these modifications should not have a significant impact on O&M staffing at the Point Loma Plant. Additional staff may be added to operate and maintain the FIRP Pump Station, but it will be minimal when compared to the start-up of a new facility. The addition of the two new sedimentation basins will have a minor impact on the Point Loma Plant operational staff. The basins may have a larger impact on the maintenance group, as the result of more equipment to maintain. Overall, the Team believes there will not be a large impact on staffing as a result of the implementation of new facilities.

For FY 1995 there was an O&M staff of 103.75 positions, excluding power generation facilities. The staffing consists of 31.75 operations positions (includes Process Control), nine engineering positions, and 61 maintenance positions. For FY 1996, the staff increases to 110 positions, consisting of 32 operations positions, nine engineering positions, and 67 maintenance positions. Considering the number of new and upgraded facilities coming on-line at the Point Loma Plant during the next few years, an increase of six maintenance positions is reasonable. The Team believes that the Point Loma Plant will be adequately staffed when new facilities come on-line.

There will be an increase in the non-personnel costs related to these improvements. The largest impact could be in power requirements. However, the Point Loma Plant does have cogeneration facilities on site, so the impact is likely to be minimal. There will also be an impact in chemical costs due to increased odor control facilities for both the FIRP Pump Station and Sedimentation Basin Nos. 11 and 12, and increased ferric chloride and polymer usage due to the new sedimentation basins.

### B.3 PROJECTED FUTURE IMPROVEMENTS

Additional improvements for the Point Loma Plant are currently under design and will begin construction during the next few years, including additional Chemical Feed System Upgrades (scheduled for completion in 1997), Digester Nos. 7 and 8 Improvements Project (scheduled for completion in 2000), Headworks/Odor Control and Grit Tank Replacement Project (scheduled for completion in 1999), Power Generation and Improvements Project (scheduled for completion in 1998), and the new Administration/Laboratory Building (scheduled for completion in 1999), and other smaller projects.

The projected O&M costs for FY 2003 for the Point Loma Plant are \$40.4 million (in 2003 dollars). This figure also includes the Cogeneration and Hydroelectric Facilities. This projected cost is based on the proposed FY 2003 O&M costs developed for the Point Loma Plant by MWWD staff. City staff use nonpersonnel expense ("NPE") equations to predict O&M costs for the Point Loma Plant. The NPE equations are based on the actual equipment power usage, maintenance schedules and chemical expenditures expected at the facilities as a function of expected facility flows. In developing the O&M costs for the Point Loma Plant, actual O&M costs, as well as anticipated chemical dosages and capital improvements, were considered. This methodology is reasonable because it considers all known operational changes.

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In January 1995, an automated flow pacing system was installed at the Point Loma Plant. This has helped optimize the amount of chemical fed at the plant and eliminated the possibility of chemical overdosing due to abrupt changes in wastewater flow without corresponding changes in chemical feed rates, which can occur with manually controlled chemical feed systems. Flow paced chemical feed systems match the amount of chemical fed to the amount of wastewater flow. Flow pacing is the first step in chemical feed optimization and can lead to significantly lower O&M costs. Additional Chemical Feed System Upgrades will further upgrade these systems throughout the Point Loma Plant and will help lower chemical related O&M costs even more.

Staffing estimates for the Point Loma Plant for FY 2003 were also developed for the Financing Plan. These staffing estimates are based on the Program and current staffing practices. Currently, 207 positions are budgeted in the Financing Plan. This includes administration, O&M, engineering, and power generation staff. Fifty-two positions are O&M Division administration positions, leaving 155 O&M positions at the Point Loma Plant in FY 2003. This is 45 additional treatment related positions when compared to FY 1996 staffing levels. This is a reasonable increase for a facility which will be expanded to 240 MGD and will have complicated instrument and control facilities to maintain, along with large chemical feed and odor control facilities.

### **C. Water Reclamation Facilities**

#### **C.1 DESCRIPTION OF PROPOSED FACILITIES**

Five water reclamation facilities have been proposed for the San Diego area to provide both additional treatment capacity and reclaimed water to interested parties throughout the City and neighboring areas. One of the reclamation facilities, NCWRP, is currently under construction and was nearing 50 percent completion as of late July 1995. The second facility, South Bay Water Reclamation Plant ("SBWRP"), is currently under design. Two other proposed water reclamation plants, Mission Valley and Otay Valley, are outside of this planning period with respect to O&M costs incurred and are not included in this Report. The Santee Water Reclamation Plant also is not included, since the Padre Dam Municipal Water District will finance, build and operate that plant.

#### **C.2 PROJECTED STAFFING OF FACILITIES**

Staffing projections given in the Project Report and the July 1993 and August 1995 Financing Plans are presented in Table VII-4. The Team was advised by City staff that the staffing projections originally developed in the Project Report were deemed to be inadequate. The estimates were subsequently upgraded and have been continuously refined by City staff.

For comparison purposes, the Team has included in Table VII-4 estimates of staffing for the proposed facilities based on the United States Environmental Protection Agency ("EPA") March 1973 publication, *Estimating Staffing for Municipal Wastewater Treatment Facilities*. It should be cautioned that the EPA methodology may yield staffing estimates which are low, since the cost curves utilized are based on the unit process approach. This approach does not take into

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account the need for additional technical and management personnel required to coordinate various processes and operations in a complex treatment facility. In addition, this document only provides direct data for facilities of up to 25 MGD capacity. Despite these limitations, this publication does contain data which is useful for comparison purposes.

In December 1994, the City received a report entitled "Review of O&M Staffing Requirements for the North City Reclamation Plant and Northern Sludge Processing Facility." This report evaluated each facility based on numerous factors, such as location, size, layout and unit processes being used. Interviews at five water reclamation plants and two solids handling facilities located in southern California were conducted to develop staffing baselines. Using the methodology developed by the EPA, the number of productive man-hours per position, and numerous additional factors, such as: the distance from the Point Loma Plant, the size of the facility, and the possible addition of a centralized maintenance facility, the report presented a ranking criteria, which enabled preparer of the report to recommend the number of supervisory, O&M and support staff needed at the facilities. Based on that analysis, 48 positions were recommended for the NCWRP when the facility is fully operational.

The personnel estimate for NCWRP seems reasonable for a tertiary treatment plant with a design capacity of 30 MGD. In the Los Angeles County Sanitation District, there are two plants with a design capacity of 37.5 MGD with 9 and 33 O&M personnel respectively. The plant with 33 personnel supplies maintenance personnel to several other facilities as well. If these plants were to add administration, management, laboratory, and electrical personnel, the totals would be closer to the projected staffing requirements for the NCWRP. The Escondido treatment plant treats an average of 15 MGD, and has 43 total personnel. The Team agrees with the report's recommendation of 48 positions for NCWRP, since it compares favorably with the staffing figures for similar facilities. The Team believes that a staff of this size can adequately meet the demands of a highly automated, tertiary treatment wastewater plant.

As shown in Table VII-4, City Staff is currently recommending 31 staff members for the SBWRP. According to the draft report "Staffing and Recruitment Plan" developed by the O&M Division of the MWWD, proposed staffing was based on the rationale set up by the NCWRP report. The Team agrees with the staffing plan that includes a stipulation that the estimate should be refined as the design progresses. This has been the practice from the beginning of the overall capital improvement planning and has been beneficial for the City.

One off-site facility will be operated and maintained by the SBWRP staff and is included in the SBWRP staffing projections. The Grove Avenue Pump Station ("GAPS") is a 6 MGD (18 MGD peak) pump station located near the SBWRP and will be maintained by SBWRP maintenance staff. The Team agrees that additional maintenance staff is not required to maintain a facility of this size.

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**C.3 PROJECTED OPERATIONS AND MAINTENANCE COSTS**

Projected O&M costs for the water reclamation facilities for FY 1996 through FY 2003 were developed by MWWD based on estimated staffing and NPE equations. NPE equations are based on the projected equipment power usage, maintenance schedules and chemical expenditures expected at the facilities as a function of expected facility flows. NPE equations for chemical costs are based on normal chemical dosage rates at the Point Loma Plant. MWWD also developed a set of assumptions for deriving O&M costs which are part of the cost equations. A fixed cost for operating each water reclamation facility was also included since some operating costs are not flow related. This methodology is reasonable because it takes all known operational changes into consideration.

As shown in Table VII-1, projected O&M costs were split into personnel costs and nonpersonnel costs. The personnel costs were derived using the staffing plan developed by the MWWD for each facility and average labor rates (\$53,490/year for all personnel). As previously discussed, the nonpersonnel costs were developed by the MWWD using equations based on operating conditions and flows for FY 2003.

Projected O&M costs for FY 2003 for the water reclamation facilities in 2003 dollars are \$7,997 million for the NCWRP and \$3.732 million for the SBWRP. These are based on the personnel numbers indicated in Table VII-4 and NPE equations. It is the Team's opinion that projected O&M costs for the water reclamation facilities are consistent with industry standards.

**D. Northern Sludge Processing Facility/Fiesta Island Replacement Project (NSPF/FIRP)**

**D.1 DESCRIPTION OF PROPOSED FACILITY**

The MWWD is currently proceeding with plans to phase out the Fiesta Island sludge drying program, currently scheduled to commence closing in the summer of 1996, with final closeout continuing through FY 1999. The FIRP will be located adjacent to the NSPF at the Miramar Naval Air Station site. Budget and personnel for the NSPF/FIRP have been included in the Financing Plan.

The NSPF/FIRP facility will consist of raw solids receiving basins, biosolids digestion (NCWRP biosolids only), chemical feed systems and odor control, lime pasteurization for compliance with Federal 503 Class A sludge regulations, biosolids dewatering using centrifuges, and solids loading and hauling facilities. Other facilities located on-site include a truck wash facility, wastewater pump station (which will return centrate and other wastewater to the Point Loma Plant) and an Operations Building which will include the operations control room, maintenance facilities and the process laboratory. A series of pipelines will carry undigested biosolids from the NCWRP to the NSPF/FIRP, digested biosolids from the Point Loma Plant, and will return wastewater from the facility to the Point Loma Plant by way of the NCWRP bypass line and the North Metropolitan Interceptor.

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Currently, the City plans to contract with outside companies to take the dewatered biosolids for subsequent beneficial reuse or disposal as is currently done with dried solids from the Fiesta Island facility. In addition, the City has selected and is currently negotiating with a private contractor to own and operate a thermal drying facility. This facility will process some of the sludge for further beneficial reuse and will be located at the NSPF/FIRP site.

#### D.2 PROJECTED STAFFING OF FACILITY

The Fiesta Island staff will be reduced in FY's 1997 and 1998 due to the closure of the facility. Staffing estimates were also developed by the MWWD for the NSPF/FIRP facility.

The NCWRP staffing analysis report included an analysis of the staffing requirements for the NSPF/FIRP facility. The report used the methodology outlined above to compare NSPF/FIRP to two other facilities in Southern California. The report also evaluated the relationship between NCWRP and NSPF/FIRP since they are in close proximity. Based on that analysis, the report recommended 33 positions for NSPF/FIRP. This can be further broken down to nine staff members for NSPF and 24 staff members for FIRP. This breakdown is reasonable, since centrifuges at the FIRP are more operations and maintenance intensive than the anaerobic digesters at the NSPF.

The Team agrees with the report's recommendation of 33 staff members for the NSPF/FIRP, since it compares favorably with the staffing figures for similar facilities. The Team believes that a facility of this type needs a highly trained staff familiar with the processes being used. The Team also agrees with City Staff's recommendation that O&M positions could be filled by personnel from other facilities within the O&M Division. This will help guarantee a committed, dedicated workforce.

The report also suggests five additional Line Crew positions be added for the NSPF/FIRP. The Line Crew is responsible for ensuring that the biosolids and wastewater lines between the Point Loma Plant, the NCWRP and the NSPF/FIRP are adequately maintained. This includes provisions for routine maintenance (line testing, flushing, steaming, leak detection, etc.), and emergency response for clearing blockages or repairing breakages. Pipeline maintenance is a necessary function, particularly for biosolids pipelines which require rigorous maintenance. The biosolids pipeline from the Point Loma Plant is a critical link in the overall Metropolitan System and must not be allowed to become inoperative. Based on our experience in the City of Phoenix with similar crews, each having four to five members, this number appears reasonable. In Phoenix, four similar crews are responsible for inspecting and maintaining the City's gravity sewer lines. The Team believes that maintaining sludge lines is more labor intensive than gravity sewer lines; therefore, the Team agrees with the recommendation of five positions for the Line Crew.

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**D.3 PROJECTED OPERATIONS AND MAINTENANCE COSTS**

The O&M costs for the NSPF/FIRP were developed based on the projected staffing and NPE relationships as previously mentioned. The NPE relationships take into account the types of equipment, the amount of power needed to operate the equipment, and chemical costs. A fixed cost is also included for areas of the facility that are not based on flow. The Team agrees that nonpersonnel costs for the NSPF/FIRP are reasonable. Additional cost savings may be achieved if cogeneration facilities are incorporated in the facility. However, this possibility has not been considered in the Financing Plan. This is a reasonable approach since these cost savings are difficult to predict based on the uncertainties related to digester and landfill gas production. The City is currently in the process of selecting a vendor to own and operate a cogeneration facility at the site.

Solids projections have been developed by City staff for the Point Loma Plant, Fiesta Island, and the NCWRP for the planning period based on future flow projections, chemical doses, and proposed process modifications. Using the percent solids assumptions discussed above, they were able to determine how many tons of dry biosolids would be produced. These projections are used to develop O&M costs for the NSPF/FIRP. Biosolids production numbers are continuously evaluated as changes occur to any of the underlying assumptions (such as projected flow), so projected O&M costs can be developed for the NSPF/FIRP.

O&M costs were also developed for trucking and disposal of sludge from Fiesta Island and the NSPF/FIRP at an average hauling rate of \$31 per dry ton of sludge hauled. This cost was then escalated based on projected price increases for biosolids disposal in the western United States. These costs are conservative considering the uncertainty of biosolids disposal options in the future. The Team concurs with this approach.

**E. Major Pump Stations and Main Interceptor System**

**E.1 DESCRIPTION OF EXISTING AND PROPOSED FACILITIES**

There are five existing pump stations and one proposed wastewater pump station operated and maintained by MWWD. The existing pump stations include Pump Station Nos. 1, 2, 64, 65 and the East Mission Gorge Pump Station. The Peñasquitos Pump Station is a new proposed pump station. Each pump station is described in Table VII-5. The anticipated staffing for FY 2003 is also given in Table VII-5. The anticipated staffing for the pump stations has increased since the July 1993 Engineer's Statement of Feasibility. The biggest increase is for Pump Station No. 2, with ten newly added positions. Pump Station No. 2 is the largest and most critical pump station in the system, so it is reasonable that the operational staff be larger than some of the other pump stations. The rationale behind this increase is described in a memorandum dated July 20, 1994 from the MWWD Deputy O&M Director to the MWWD Deputy Support Services Director. According to the memo, new gas powered engines have been added at Pump Station No. 2, and additional staff is required to service these engines. The memo also states that additional electronic and electrical maintenance personnel will be required to support the existing and future pump station control systems. Based on conversations with City Staff, some of these



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maintenance positions are related to the new Instrumentation and Control systems at the pump stations. These positions appear to be stationed only at Pump Station No. 2 and perform work at all of the pump stations.

There have also been increases in staffing at some of the other existing pump stations due to the decision by the City to staff the larger stations, most of which are in critical areas, 24 hours a day. Based on conversations with City Staff, Pump Station Nos. 64, 65, the East Mission Gorge Pump Station and the proposed Peñasquitos Pump Station each have four pumps that are controlled in a lead/lag arrangement. The City does have off-site monitoring capabilities for these stations at Pump Station No. 2, but currently the pumps cannot be controlled remotely. The planned staffing at these pump stations appears reasonable.

**E.2 DESCRIPTION OF OPERATIONS AND MAINTENANCE COSTS**

The O&M costs for the existing and proposed pump stations are included in Table VII-1 and are based on staffing projections and NPE equations developed by City staff. Based on the information the Team has received, the O&M costs are reasonable. The O&M staff at the pump stations are actively developing ways to lower pump station nonpersonnel costs such as electric and gas costs. Pump station staff members are currently optimizing pump energy usage through the use of variable speed drives, the engine-driven pumps at Pump Station No. 2, and load monitoring equipment. The O&M staff are actively working with the local power utility to monitor how much energy is used and when it is being used, in an attempt to optimize costs. This type of optimization will help stabilize and/or reduce O&M cost in future years.

**F. Municipal Collection System**

**F.1 EXISTING SYSTEM**

The Municipal System, as of 1995, includes 2,498 miles of sewer lines and 82 major and minor pump stations. The Municipal System also maintains the pumps for 18 storm water pump stations for the Street Division of the City General Services Department. Performance measurements, such as the number of miles of sewer mains cleaned, laterals repaired or replaced, pump station wet wells cleaned, and pumps maintained, are used as a measure of the Municipal System's performance. The impact of these efforts are reflected in the projected O&M costs. FY 1995 transmission O&M costs were budgeted at \$14.74 million, but were actually \$14.42 million.<sup>13</sup> The O&M cost per mile of sewer is \$5,773. FY 1996 transmission O&M costs are projected to be \$17.2 million. The increase between FY 1995 and FY 1996 is primarily due to an increase in sewer line maintenance and cleaning costs which stem from the performance goals as well as increases in pump station nonpersonnel expenses. The Team believes the existing Municipal System is adequate to serve the community and that O&M costs are reasonable.

The WUD also started a program in FY 1989 called the Food Establishment Wastewater Disposal (FEWD) Permit Program. The mission of this program is to permit, inspect and enforce the use of grease removal systems (i.e., grease traps) in food establishments. Program personnel

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13. City of San Diego Water Utilities Department Financial Plan—figure does not include administration or engineering costs.

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regularly inspect grease traps and other methods used by food establishments to ensure they are adequately preventing grease from entering the Municipal System. The program has helped reduce the amount of grease and scum that reaches the Point Loma Plant, thus reducing sludge treatment and disposal costs. The success of the FEWD Permit Program was mentioned by many people the Team interviewed. Interdepartmental cooperation of this type can help reduce those O&M costs for both the wastewater collection and treatment systems.

#### **F.2 PROJECTED FUTURE SYSTEM**

The Team reviewed San Diego Association of Governments ("SANDAG") population growth projections and historical collection system figures in order to assess the adequacy of the projected O&M costs for the Municipal System through the year 2003. Based on the Team's analysis, the projected O&M costs for the system through FY 2003 are reasonable and adequate to efficiently operate and maintain the Municipal System.

The Team has assumed that the operation and maintenance of the Municipal System will be the responsibility of the WUD for the foreseeable future. As previously discussed, the Reclaimed Water Distribution System will also be operated and maintained by the WUD with those O&M costs allocated to the Water Operating Fund.

In the August 1995 Financing Plan, the projected cost of operating and maintaining the Municipal System after FY 1996 is increased only by the rate of inflation. The Plan assumes that incremental increases due to system growth will not be incurred.

#### **F.3 RIGHT-OF-WAY CHARGE**

A portion of the Municipal System O&M cost is a Right-of Way charge by the City to the WUD. This charge is for all the land used by the WUD for the Municipal System. The Right-of-Way charge has grown from \$2.3 million in FY 1994, when it originated, to \$7.5 million in FY 1996. The Team has no basis on which to evaluate the reasonableness of the charge included in the Financing Plan.

### **G. Other Proposed Support Facilities and Groups**

#### **G.1 ADMINISTRATION**

The O&M Division has a large administrative staff composed of different groups. Administration staffing consists mostly of support staff who have varied roles in the operations and maintenance of the wastewater system. The administration subgroups include the Resources Development Team, Administrative Services, DCS/COMNET planning, Facilities Services, and Safety Services. The total administrative staffing projected for FY 2003 is 52 positions. The following functional descriptions have been developed for these subgroups.

The role of the Resources Development Team is varied. It is responsible for the training of O&M staff for both the treatment facilities and the pump stations. This includes continuing education, facility specific training using computerized simulations, and new hire development and training. The team is also responsible for O&M Manuals and Standard Operating Procedures preparation and revisions. The team currently also includes up to 12 trainees on its organizational chart. Based on the varied tasks of the Resources Development Team, it is the Team's opinion that the number of personnel is justified.

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Another subgroup reviewed by the Team is Safety Services. The Safety Services group has six positions budgeted for FY 2003. The group is responsible for all safety training at both the treatment facilities and the pump stations, safety inspections of all facilities, safety equipment purchasing, repair and individual personnel equipment fittings, and the investigation of accidents or safety related complaints at all facilities. Based on the diversity of the O&M Division and the tasks, the Team agrees this is a reasonable number.

The remaining positions relate to the clerical, payroll, administrative and analyst positions needed due to staffing increases within the O&M Division. It is the Team's opinion that these positions are justified and reasonable.

#### G.2 CENTRAL WAREHOUSE FACILITY

There has been a change in the use of the Central Warehouse since its conception in 1991. Originally, the facility was proposed as a short-term storage facility for large equipment. Currently, the Central Warehouse Facility is proposed to be the central storeroom for the O&M Division, the receiving station for divisional deliveries, and a storage site. It is from this centralized facility that all other facilities will receive their supplies. There are currently four positions proposed for the warehouse. This is a reasonable number for a facility of this type.

Nonpersonnel expenses allotted to this facility were developed based on an initial inventory at the warehouse for all new mechanical equipment at five percent of the Program Manager's estimate of the total cost of the new equipment, and generalized cost of equipment being stored in the building. The NPE costs projected for the Central Warehouse Facility are \$70,000 in FY 2003, but are higher in previous fiscal years due to facility start-ups. This is a reasonable assumption.

#### G.3 CENTRAL MAINTENANCE FACILITY

Currently, there are 44 positions allotted to the Central Maintenance facility in FY 2003. The Central Maintenance Facility was originally established to provide additional maintenance support which would normally be contracted out, such as minor roofing, carpentry, welding, major equipment overhaul, and building maintenance. The Team believes this is the most cost effective way to adequately maintain a system of this size.

#### G.4 TECHNICAL SERVICES

The Environmental Monitoring and Technical Services ("EMTS") Division is responsible for regulatory permitting, compliance monitoring and reporting. It also provides processes control testing for the wastewater facilities, bench scale process testing and analysis and special studies for new process evaluation or in support of planning/design studies. The division also operates the industrial waste permitting, compliance and laboratory sections. Additional duties include review and comment on pending legislation, acting as a liaison with the regulatory agencies and negotiating National Pollutant Discharge Elimination System ("NPDES") permits.

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The division currently has 136 positions to accomplish this work. Eight positions are allocated to the administrative section that provides administrative support and gives overall direction to the staff. The wastewater chemistry laboratory is located at a central location with a technical staff of 36 and provides compliance sampling and testing for the operational facilities, and prepares the required regulatory reports. The biology laboratory is staffed by 40 positions that conduct microbiological and marine biology testing. Included is an ocean operations section that includes two ocean going vessels and vessel operators.

The Industrial Waste Pretreatment section has a staff of 23 who are responsible for permitting industrial discharges to the sewer. Besides issuing permits, they also annually inspect the industries, review reports, measure compliance, and take enforcement action, if necessary. The Industrial Waste Laboratory has 29 positions and is responsible for sampling and analysis of the permitted industries to determine compliance with their permits. They also do special projects such as wastewater characterization studies for new facilities and sewage strength determinations for billing purposes. This laboratory is also doing contract work for an outside agency.

In future years the EMTS Division will need to adjust its staffing to provide support for the new facilities under construction or being planned. It is currently estimated that division staff will be increased by 17, for a total of 153 by the year 2003. The increase in staffing is low because the Division believes the use of instrumentation, automation and economy of scale will help keep staff size small.

#### G.5 ADDITIONAL O&M COSTS FOR FY 1996

Due to a City Council decision in May 1995, a storm water program has been initiated within the City for FY 1996. The budgeted cost for this program is \$2.1 million. This is a one-time cost which has not been added to other fiscal years. The addition of this cost has been noted within the Financing Plan and appears to be reasonable.

#### H. Impact of Instrumentation and Control System on Future Operations and Maintenance Costs

The NCWRP will be controlled through an automated Instrumentation and Control System called the COMNET System. By 1998, all of the City's treatment facilities will be monitored by the system, allowing any facility to access the operating information of any other facility. It could also allow for centralized operation of the facilities. The City does not plan to decrease the operational staff of any facility because of the new systems. However, as operators become more familiar with the new systems and are able to adequately control the facilities from a central location, the City may not replace operators who leave through attrition. The Team was given a demonstration of the instrumentation and control system for the NCWRP. It is a highly specialized control system which will enable O&M personnel to check the status and condition of every piece of equipment and unit process in the plant. It will give plant staff more up-to-the-minute information and extremely detailed controllability. When the plant staff becomes fully trained on the system, it will save time and allow them to perform their jobs more efficiently.

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The Team believes the COMNET system may have a large impact on reducing O&M costs in the future due to its versatility.

**I. Start-up Staffing Schedule**

In January 1995 the O&M Division drafted a report titled "Staffing and Recruitment Plan" which discussed the hiring of additional staff for new facilities. Execution of the proposed hiring schedules for the facilities currently under construction will assist the City in a smooth transition from construction and start-up to actual operation. The proposed hiring schedule typically allows for a full nine months from the beginning of the hiring process to the intended start date of the position. The intent of this approach is to have critical staff members on site approximately six months before process testing begins, which correlates to one year prior to facility start-up.

Several similar facilities were contacted regarding the timing of start-up staffing after new facilities or processes were added.

King County Department of Metropolitan Services in Seattle, Washington is currently upgrading its West Point facility from primary treatment to an oxygen activated sludge secondary system. A task force was formed to handle the staffing of the upgraded facility. The task force worked with the local union, the department's human resources staff and neighboring treatment facilities to determine the effects that the new hiring would have at the facility and on the surrounding communities. Much of the new staff was brought on one year prior to plant start-up to be trained for the new facility, and to cover for the existing staff while they received their training.

The City and County of San Francisco recently constructed and began operating a new secondary treatment plant (Oceanside) on the west side of the City. San Francisco concurrently shut down an existing primary treatment plant and ultimately transferred its staff to the new facility. Temporary operators were hired during the simultaneous overlapping of the start-up and shutdown of the two facilities. The Superintendent for the Oceanside plant was hired a full year prior to start-up, along with several shift supervisors, a few operators and a few maintenance personnel. This personnel was responsible for writing the O&M procedures and manuals while the facility was under construction. Six months prior to start-up, between 50 to 75 percent of the full operations staff had been hired in order to be present for manufacturer equipment testing and training.

The City of Mesa, Arizona plans to expand its existing facilities and construct one new facility within the next five years. The staffing schedule for the plant expansions is to bring on new staff approximately halfway through construction. For the new facility, Mesa is planning to bring on key staff members at least one year before completion with the majority of the remaining operators hired at least six months prior to start-up.

Based on discussions with the other wastewater treatment facilities where new construction has required additional staffing, the City's start-up staffing schedule appears to be reasonable.

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**J. Adequacy of Proposed System**

It is the Team's understanding that future flow projections were based on SANDAG population estimates. The City adjusts these estimates to correspond with the population of the service area. This is a reasonable approach for sizing future facilities. The MWWD's method of estimating O&M costs by using cost equations supplemented by actual O&M costs for existing facilities is also reasonable. The use of these equations provides a consistent and reliable projection of future O&M costs.

**K. Conclusion**

O&M costs for the Municipal System are reasonable. The FY 1996 Municipal System projected O&M budget of \$17.2 million used in the Financing Plan is reasonable and has been justified by City personnel. Overall, the projected increases in O&M costs for the Municipal System to FY 2003 are reasonable. Given trends in population growth, the Municipal System would be adequate.

The O&M costs for the Point Loma Plant are reasonable and compare well with other wastewater treatment facilities surveyed. Planned staffing for the facility is reasonable considering the current and future improvement. The projected O&M costs for water reclamation and biosolids processing facilities are reasonable. The MWWD staff has continued to refine and streamline these staffing estimates as the program has developed. The Team believes that this process should continue as the system grows.

The MWWD's use of cost equations for the nonpersonnel costs, based on the types of equipment at each facility, the power needed to operate the facility, and chemical costs based on anticipated flows, and its use of actual O&M cost data, is reasonable.

The O&M Division administrative groups are also adequately represented in the Financing Plan. All the background information given to the Team appears to be reasonable and has been adequately explained by O&M Division staff.

The necessity of a Central Maintenance Facility is currently under review by the City. There is a concern that in-house maintenance staff cannot respond to problems as fast as contracted services. Also, it is believed that outside contractors may be better suited than City Staff for repairing certain pieces of equipment such as large pumps. MWWD Management has indicated that this issue will be resolved before further planning takes place.

The projected O&M costs for the major pump stations and main interceptor system in FY 2003 are reasonable. The proposed budget is reasonable and takes into consideration all identified major changes to the Metropolitan System.

The Team believes that current facility start-up staffing practices compare well with other new facilities surveyed. The Team believes current start-up staffing practices proposed will save the City money in the future because each facility will have a staff that is intimately knowledgeable about the plant and understands the equipment installed.

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Table VII-1

DERIVATION AND COMPARISON OF OPERATIONS AND MAINTENANCE COSTS<sup>A</sup>  
FOR METROPOLITAN WASTEWATER DEPARTMENT PROJECTS  
FROM BASIC DATA AND THE FINANCING PLAN FOR FISCAL YEAR 2003

Facility	Design Capacity (MGD)	Expected Flow (MGD)	Staff <sup>B</sup>	Nonpersonnel Costs <sup>C</sup> (2003 \$)	Personnel Costs <sup>D</sup> (2003 \$)	Total Costs (2003 \$)	Unit Costs (\$/mg)
<b>Existing Metropolitan Wastewater Department Facilities</b>							
Pump Station 64/65/EMG <sup>E</sup>	—	64 <sup>F</sup>	33	\$6,736,000	\$2,460,000	\$9,196,000	\$393.66
Pump Station 1	—	75	15	\$1,856,000	\$1,118,000	\$2,974,000	\$108.64
Pump Station 2	—	200 <sup>G</sup>	29	\$7,332,000	\$2,162,000	\$9,494,000	\$130.05
Point Loma Advanced Primary	240	200 <sup>G</sup>	207	\$24,947,000	\$15,431,000	\$40,378,000	\$553.12
Technical Services	—	—	93	\$10,418,000	\$7,040,000	\$17,458,000	—
Subtotal, Existing Metropolitan Sewer System			377	\$51,289,000	\$28,211,000	\$79,500,000	
<b>New Metropolitan Wastewater Department Facilities</b>							
North City WRP	30	30	48	\$4,419,000	\$3,578,000	\$7,997,000	\$730.32
South Bay WRP/GAPS	7	7	31	\$1,422,000	\$2,311,000	\$3,733,000	\$1,461.06
Northern Sludge Processing	22 <sup>H</sup>	22 <sup>H</sup>	9	\$669,000	\$670,000	\$1,339,000	166.75 <sup>I</sup>
Fiesta Island Replacement Project	174 <sup>H</sup>	174 <sup>H</sup>	24	\$2,440,000	\$1,790,000	\$4,230,000	66.60 <sup>I</sup>
Penasquitos Pump Station <sup>E</sup>	—	8	11	\$794,000	\$820,000	\$1,614,000	\$552.74
Central Maintenance and Warehouse Facility	—	—	44	\$70,000	\$3,279,000	\$3,349,000	—
Contracted Solids Handling	—	—	—	\$14,005,000	—	\$14,005,000	—
Technical Services	—	—	54	\$2,224,000	\$3,808,000	\$6,032,000	—
Subtotal, New Facilities			221	\$26,043,000	\$16,256,000	\$42,299,000	
<b>TOTAL</b>			<b>598</b>	<b>\$77,332,000</b>	<b>\$44,467,000</b>	<b>\$121,799,000</b>	

Notes:

- A Basic data inflated from FY 1996 dollars by 4% for FY 1997 and by 5% all future years to FY 2003
- B Staffing numbers include administration, engineering, maintenance, operation, and power production personnel when the facility is completely staffed.
- C Nonpersonnel costs developed by the Program Manager and found on Tables H-3 and H-4 of the August 1995 Financing Plan Background Information.
- D Personnel costs developed by the City and the Program Manager and found on Table H-5 of the August 1995 Financing Plan Background Information.
- E Municipal System facilities operated and maintained by MWWD.
- F Assumes 32 MGD at P.S. 64, 10 MGD at P.S. 65 and 22 MGD at East Mission Gorge P.S.
- G Includes 28 MGD of recycle flow from NCWRP effluent, S&J WRF effluent, SBWRP raw sludge, and NSPF/FIRP centrate.
- H Dry tons per day.
- I Cost/dry ton.

VII. OPERATIONS AND MAINTENANCE

Table VII-2

WASTEWATER TREATMENT PLANT OPERATIONS AND MAINTENANCE BUDGETS FOR SELECTED CITIES - SURVEY PERFORMED AUGUST 1995

City/Plant	Design Flow (MGD)	Actual Flow (MGD)	Total Staffing	Number of Shifts	Direct Costs <sup>A</sup> (\$)	Indirect Costs <sup>B</sup> (\$)	Total Costs (\$)	Personnel Costs (\$)	Nonpersonnel Costs (\$)	Unit Costs (\$/mg)	Remarks
City of San Diego, California (Advanced Primary Treatment)											
Pt. Loma	219	182.2	103.75	5	\$16,221,567	\$2,233,090	\$18,454,657	\$5,326,441	\$13,128,216	\$277.43	Actual costs for fiscal year 1994-95
City of Phoenix, Arizona - Secondary Treatment Costs											
91st Ave.	150	143.5	127	5	\$12,279,384	\$4,257,478	\$16,536,862	\$5,311,047	\$11,225,815	\$315.73	Actual costs for fiscal year 1994-95.
23rd Ave.	54	43.2	82	5	\$4,881,937	\$1,605,836	\$6,487,773	\$2,750,824	\$3,736,949	\$411.39	Actual costs for fiscal year 1994-95.
Metropolitan Denver Wastewater Reclamation District - Secondary Treatment Costs (no filtration at this facility)											
Plant 1	188	139.6	358	5	\$27,527,629	\$2,282,536	\$29,810,165	\$17,502,169	\$12,307,996	\$585.02	Actual costs for 1994.
Orange County Sanitation District - Secondary Treatment Costs (no filtration at this facility)											
Plant 1	108/66 <sup>C</sup>	87 <sup>D</sup>	636	5	\$43,457,000	\$4,194,000	\$47,651,000	\$25,458,000	\$22,193,000	\$538.85	Actual costs for fiscal year 1994-95.
Plant 2	286/90 <sup>C</sup>	154 <sup>D</sup>		5							Total for both plants.
City and County of San Francisco - Secondary Treatment											
Southeast	84	76.6	317	5	\$42,828,621	\$7,059,299	\$49,887,920	\$19,209,234	\$30,678,686	\$1,339.08	Total for both main plants and one wet weather facility.
Oceanside	65	21.2									
Los Angeles County Sanitation District - Reclamation Plants (sludge is not treated at these plants)											
San Jose Creek (1&2)	62.5	54.7	37	5	\$5,964,546	\$888,342	\$6,852,888	\$2,509,688	\$4,343,200	\$343.17	Actual costs for fiscal year 1994-95.
San Jose Creek (3)	37.5	26	9	5	\$2,764,497	\$200,199	\$2,964,696	\$1,391,004	\$1,573,692	\$312.84	Actual costs for fiscal year 1994-95.
Los Coyotes	37.5	33.9	33	5	\$4,404,634	\$409,957	\$4,814,591	\$1,941,641	\$2,872,950	\$389.49	Actual costs for fiscal year 1994-95.
Long Beach	25	19.3	7	2	\$2,573,413	\$280,080	\$2,853,493	\$1,193,688	\$1,659,805	\$404.57	Actual costs for fiscal year 1994-95.
Whittier Narrows	15	11.7	5	2	\$1,541,543	\$246,919	\$1,788,462	\$695,456	\$1,093,006	\$417.54	Actual costs for fiscal year 1994-95.
Pomona	15	12.8	10	2	\$1,561,169	\$193,931	\$1,755,100	\$730,809	\$1,024,291	\$377.04	Actual costs for fiscal year 1994-95.
City of Escondido, California - Secondary with Proposed Reclamation Plant											
Hale Avenue	17.5	15	43	5	\$4,615,385	\$2,070,125	\$6,685,510	\$2,068,545	\$4,616,965	\$1,221.10	Actual costs for fiscal year 1994-95.

Notes:

- A Direct Costs include personnel services, materials and supplies, chemicals, utilities, gasoline, solvents, tools, etc.
- B Indirect Costs include rental fees, odor control, professional services, outside laboratory services, groundskeeping, etc.
- C Primary capacity/secondary capacity.
- D Typically approximately half of the flow receives secondary treatment.



VII. OPERATIONS AND MAINTENANCE

Table VII-3

WASTEWATER TREATMENT PLANT OPERATIONS AND MAINTENANCE STAFFING FOR SELECTED CITIES - SURVEY PERFORMED AUGUST 1995

City/Plant	Total Annual Flow (MG)	Avg Daily Flow (MGD)	Total Personnel	Total Personnel Per MGD	O&M Personnel Per MGD	Personnel Break down							Engring and Constr Mgmt	Other	Remarks
						Mgmt	Admin	Oper	Maint	Safety	Lab				
City of San Diego															
Point Loma	66,520	182.2	103.75	0.57	0.51	—	2	31.75	61	—	—	9	—	Does not include power generation.	
City of Phoenix, Arizona															
91st Avenue	52,376.55	143.5	127	0.89	0.85	—	5	63	59	—	—	—	—	Laboratory personnel work for Water Quality, and electricians for Public Works.	
23rd Avenue	15,770.38	43.2	82	1.90	1.78	—	5	42	35	—	—	—	—		
Metropolitan Denver Wastewater Reclamation District															
Plant 1	50,956.00	139.6	358	2.56	1.01	6	57	141	—	—	47	32	75	Maintenance staffing included with Operations. 19 - Regulatory/Connector Relations. 56 - Resource Recovery and Reuse.	
Orange County (CA) Sanitation District															
Combined Plants	88,430.21	242.3	636	2.63	1.47	8	50	136	220	23	52	71	76	26 - Information Systems and Hardware. 22 - Environmental Management. 44 - Source Control.	
City and County of San Francisco															
Combined Plants	37,255.30	102.1	317	3.11	2.37	3	15	130	112	14	41	—	2	Engineering is in a different department.	
City of Escondido															
Hale Avenue	5,475	15	43	2.87	1.93	4	2	18	11	—	8	—	—		
Los Angeles County Sanitation District															
San Jose Creek 1&2	19,969.61	54.7	37	0.68	0.66	—	—	17	19	—	1	—	—	Engineering, lab, management and administration are all common district-wide and are not included in these numbers. Two centralized maintenance staffs handle all maintenance for these facilities.	
San Jose Creek 3	9,476.63	26.0	9	0.35	0.31	—	—	7	1	—	1	—	—		
Los Coyotes	12,361.23	33.9	33	0.97	0.94	—	—	14	18	—	1	—	—		
Long Beach	7,035.19	19.3	7	0.36	0.31	—	—	5	1	—	1	—	—		
Whittier Narrows	4,283.36	11.7	5	0.43	0.34	—	—	3	1	—	1	—	—		
Pomona	4,654.97	12.8	10	0.78	0.71	—	—	8	1	—	1	—	—		

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VII. OPERATIONS AND MAINTENANCE

Table VII-4

COMPARISON OF STAFFING ESTIMATES FOR FY 2003  
FOR METROPOLITAN WASTEWATER DEPARTMENT NEW FACILITIES

Facility	Size (MGD)	Personnel Estimates			
		Project Report May, 1990	July 1993 Financing Plan	August 1995 Financing Plan	EPA <sup>1</sup>
North City WRP	30.0	35	66	48	35
South Bay WRP/GAPS	7.0	104 <sup>2</sup>	NS	31	20
Northern Sludge <sup>3</sup>	22 <sup>4</sup>	NS	20	9	NS
FIRP <sup>5</sup>	172 <sup>4</sup>	NS	44	24	NS
Northern Sludge Processing/FIRP	172	44	64	33	NS
East Mission Gorge Pump Station <sup>6</sup>	22	NS	8	8	NS
Penasquitos Pump Station <sup>6</sup>	8	NS	NS	11	NS
Central Maintenance and Warehouse Facility	—	NS	7	44	NS
Technical Support	—	NS	19	54	NS

Notes:

- NS Not Specified.
- 1 U.S. Environmental Protection Agency, "Estimating Staffing for Municipal Wastewater Treatment Facilities (1973)".
- 2 Staffing originally included staffing for the South Bay Secondary Treatment Plant.
- 3 Thickening and digestion only.
- 4 Dry tons per day.
- 5 Dewatering and loading of haul vehicles.
- 6 Municipal System facilities operated and maintained by MWWD.

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**Table VII-5**

**PUMP STATION FLOWS, STAFFING, AND UNIT PROCESSES  
FOR METROPOLITAN WASTEWATER DEPARTMENT**

Facility	Flow <sup>1</sup> (MGD)	Anticipated Staff	Major Unit Processes
Pump Station No. 1	75	15	Electric, Centrifugal Extended Shaft Pumps
Pump Station No. 2	200 <sup>2</sup>	29	Main Pump Station to Pt. Loma Plant, 2 Gas Engine Powered Pumps, 6 Electric Pumps
Pump Station No. 64 <sup>3</sup>	32	15	Feeds NCWRP, 4 Electric, Centrifugal Extended Shaft Pumps
Pump Station No. 65 <sup>3</sup>	10	10	4 Electric, Centrifugal Extended Shaft Pumps
Penasquitos Pump Station <sup>3</sup>	8	11	4 Electric, Centrifugal Extended Shaft Pumps
East Mission Gorge Pump Station <sup>3</sup>	22	8	4 Electric, Centrifugal Extended Shaft Pumps

Notes:

- <sup>1</sup> Anticipated flows for FY 2003.
- <sup>2</sup> Includes recycle flows from NCWRP, NSPF/FIRP, and South Bay WRP.
- <sup>3</sup> Municipal System facilities operated and maintained by MWWD.

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## VIII. FINANCING PLAN

### A. Introduction

The City Staff prepares a continuing series of financing plans in connection with its financial management of the Sewer Revenue Fund. The City Staff annually compares the Financing Plan projections to the actual results for the year and analyzes the variances. This analysis is used to revise assumptions used in future financing plans.

In connection with the issuance of the Sewer Revenue Bonds, Series 1993, the Team evaluated a financing plan that considered the eleven year period beginning July 1, 1992, and ending June 30, 2003 ("the August 1993 Financing Plan"). The Team has now evaluated a Financing Plan that considers the eight year period beginning July 1, 1995, and ending June 30, 2003 ("the August 1995 Financing Plan" or "Financing Plan").

#### A.1 FINANCING PLAN

The August 1995 Financing Plan for the Sewer Revenue Fund includes projections of estimated revenues, debt issues and other sources of funds needed to fund CIP expenditures, O&M expenses, debt service, and administrative expenses of the Metropolitan and Municipal Systems.

The supporting documentation for the Financing Plan is assembled in a document entitled *City of San Diego, Sewer Enterprise Fund, Financing Plan, Fiscal Years 1996-2003, August 1995*. Table 1-1 entitled "City of San Diego Sewer Revenue Fund, Revenues and Expenditures Statement," Table 1-1A entitled "City of San Diego Sewer Revenue Fund, Operating Revenues and Expenditures," and Table 1-1B entitled "City of San Diego Sewer Revenue Fund, Capital Sources and Uses Statement," are included at the end of this section.

High-Point Rendel was retained by the City to independently evaluate the Financing Plan as described below:

Financing Plan - The Consultant shall evaluate the adequacy of the revenue program for providing revenues that will meet O&M, debt service, coverage requirements, and pay-as-you-go capital expenditures. These rates and fees shall be compared with those of other municipalities.

### B. Scope and Approach

The procedures described in this section of the report were performed to evaluate the feasibility of the Financing Plan in conjunction with the City's proposed Series 1995 bond offering. The

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Financing Plan presents the City's projection of revenues, debt issues and other sources of funds expected to be available during the projection period to meet O&M expenses for existing and proposed Metropolitan and Municipal System facilities, annual debt service requirements, coverage requirements, administrative expenses, payments to reserve funds, and capital expenditures. For purposes of the Series 1993, the Series 1995, and future bond issues, net revenues must also be sufficient to meet applicable debt service coverage requirements in the Bond Documents. The Financing Plan is based on certain assumptions made by the City which are anticipated to be achieved during the projection period.

The following procedures were completed to accomplish the Financing Plan evaluation:

- Compared the CIP budget to the Financing Plan.
- Compared the O&M budget to the Financing Plan.
- Recalculated debt service included in the Financing Plan.
- Reconciled the encumbrances and continuing appropriations to the 1994 audited financial statements.
- Read and assessed the assumptions relating to revenues; specifically, assumptions of growth in customer base, wastewater increases due to population increases, wastewater reductions due to conservation, and interest rate assumptions.
- Recalculated revenue items in excess of \$10 million using the Financing Plan assumptions and reconciled them with supporting documentation.

### C. Discussion

#### C.1 SIGNIFICANT REVENUE ASSUMPTIONS

Primary revenue sources are sewer service charges from single-family and nonsingle-family users and capacity charges paid upon development of property. An adequate revenue stream from these sources is dependent upon increasing rates and an increasing user base.

Single-family service charge revenue is computed as a fixed charge multiplied by the number of users. In the case of nonsingle-family users, service charge revenue is computed based on a fixed charge for a proportion of metered water usage. The total service charge revenue projected in the Financing Plan represents approximately 62% of the sum of total operating revenue and total other income (see summary table below).

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The contribution of capacity charge revenue in the August 1993 Financing Plan was projected to increase substantially over the fiscal years presented due to a combination of increasing development and increasing charge rates. The current Financing Plan incorporates significant changes in assumptions with respect to capacity charge revenue. The current assumptions are for no increase in the charge rate and a five percent (5%) per year increase in development beginning with a projected Equivalent Dwelling Unit ("EDU") base of 2,200 for FY 1996 which is based on the five year average of FY 1991 through 1995. The total capacity charge revenue projected in the Financing Plan represents approximately 6% (versus 17% in the August 1993 Financing Plan) of the sum of Total Operating Revenue and Total Other Income (see summary table below). The rates and charges needed to support the Financing Plan are discussed below.

*Sewer rates.* The rates are established annually by the City Council of the City of San Diego. Increases in rates through FY 1995 were approved and implemented. The City Council did not approve a rate increase for FY 1996.

The City covenanted in the Bond Documents to fix, prescribe and collect rates and charges during each Fiscal Year which will be sufficient (i) to pay all obligations (other than the parity obligations) and (ii) to yield net system revenues equal to 1.2 times the debt service for the year. The Financing Plan, therefore, assumes that the City Council will approve rate increases for Fiscal Years 1997 and beyond to meet all financial obligations.

The projected average single-family monthly service charge rates and the respective annual percentage increase assumed in the Financing Plan for the years 1996 through 2003 are shown below:

YEAR	AVERAGE SINGLE-FAMILY MONTHLY SERVICE CHARGE	
	Rate	% INCREASE (A)
1996	22.91	0
1997	24.28	6.0
1998	25.74	6.0
1999	27.28	6.0
2000	29.46	8.0
2001	31.82	8.0
2002	34.37	8.0
2003	37.12	8.0

(A) The percentage increase over the prior year also is projected to be applied to the rate for nonsingle-family sewer service charges.

VIII. FINANCING PLAN

*Sewer service charges.* Sewer service charge revenues are from two groups of users which are under two distinct rate structures. The two groups are "single-family residential" and "nonsingle-family residential" customers.

Single-family residential customers pay a fixed charge per month, plus a rate per hundred cubic feet (HCF) of metered water usage. This residential rate structure was implemented in FY 1994 and results in different customers paying different monthly charges depending upon their water usage.

The Financing Plan projects the revenue from single-family residential customers based on the prior year's revenue, increased by the change in average rates charged and population changes in each year of the projection period.

Nonsingle-family customers<sup>14</sup> pay a charge based on a proportion of metered water usage. The assumptions used to project nonsingle-family revenues include increases in rates charged and increases in wastewater flows for each year of the projection period. The Financing Plan assumes increases in flows based on the results of a study that projected flows for the period. The results of the study are documented in a memorandum dated October 28, 1994, entitled *Allocation of Wastewater Flow to User Classifications* and referred to as the "Flow Projections Report". The Flow Projections Report was completed by a team comprised of City Staff and consultants assembled for that purpose. The process undertaken was to identify actual 1994 flows from City records. The 1994 flows were projected to 2005 using SANDAG Series 8 sewer population information. The intermediate years were straight line projected in two segments: from 1994 to 1997, the rate of increase is approximately 4% and from 1998 to 2003 the rate of increase is approximately 2%. The 4% rate for 1994 to 1997 assumes that increased flows will result from less water conservation as a result of the end of the drought and such increased flows will be absorbed in this period.

The projected sewer service charge revenues (in thousands of dollars) for fiscal years 1996 through 2003 are shown below:

Fiscal Year	1996	1997	1998	1999	2000	2001	2002	2003
Single Family	\$54,946	\$58,716	\$63,187	\$67,969	\$74,317	\$81,532	\$89,552	\$98,340
Non-single family	\$78,061	\$84,830	\$91,655	\$99,495	\$108,699	\$118,782	\$131,233	\$143,299
Service Charge Revenues	\$133,007	\$143,546	\$154,842	\$167,464	\$183,016	\$200,314	\$220,785	\$241,639
Combined % increase	1.56	7.92	7.87	8.15	9.29	9.45	10.22	9.45

14. Nonsingle-family customers include multi-family, commercial, industrial and all customers other than single family.

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**Capacity charges.** Capacity charge revenues represent fees charged upon development of property for capacity in the Metropolitan and Municipal Systems. The charge is applied on an equivalent dwelling unit (EDU) basis to a new, an additional, or a larger connection to the Municipal System. The projected revenues (presented in thousands of dollars) and increases in single-family equivalents are shown below:

Fiscal Year	1996	1997	1998	1999	2000	2001	2002	2003
Revenue	\$15,396	\$16,166	\$16,974	\$17,823	\$18,714	\$19,650	\$20,632	\$21,664
EDU's	2,200	2,310	2,426	2,547	2,674	2,808	2,948	3,096
Rate/ EDU	\$6,998	\$6,998	\$6,998	\$6,998	\$6,998	\$6,998	\$6,998	\$6,998

The 1995 EDU rate of 1,625 is below the previous four years which were 2,757 for 1991, 2,762 for 1992, 2,100 for 1993, and 2,509 for 1994. The average for the five years is 2,351 and 2,200 is used as the 1996 estimate. The Financing Plan assumes a 5% increase in development of real property and no increase in capacity charge rates over the projection period.

**Participating Agencies.** The Metropolitan System provides treatment services to fourteen Participating Agencies. Each Participating Agency has entered into a sewage disposal agreement with the City. Under the agreement, a Participating Agency pays an annual capacity service charge and its proportionate share of total O&M expenses. In addition, certain Participating Agencies are obligated to pay a portion of the incremental cost of expanding the system's capacity to 234 MGD. Presently, certain costs being billed to the Participating Agencies are being contested; however these contested costs are not included in Financing Plan revenues. The agreements expire on June 30 or August 31, 2003, with the Participating Agencies having the option to extend the agreements for an additional ten years.

The total payments from Participating Agencies projected in the Financing Plan represent approximately 13% of the sum of Total Operating Revenue and Total Other Income. (See "Sewage treatment plant services" in the summary table below.)

**Interest Earnings.** Funds exclusive of bond proceeds are invested until needed in the City's pooled fund. Bond proceeds are managed separately by the City Treasurer. The cash flow assumes a reinvestment rate of 5% per annum which is below the annual rate earned in the pooled fund for nine of the ten years preceding the projection period. The interest earnings (excluding interest earned on construction funds) included in the Operating Revenues and Expenditures statement represents approximately 6% of the sum of Total Operating Revenue and Total Other Income (see summary table below).



VIII. FINANCING PLAN

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*Grants and Contributions in Aid of Construction.* A grant from the United States Environmental Protection Agency ("EPA") has been approved and included in the Financing Plan. The grant is for the NCWRP Project in the total amount of \$70.5 million, a portion of which was included in pre-1996 receipts. The balance is projected to be received in 1996 and 1997. "Contributions in Aid of Construction" include one major award from the EPA for the South Bay Ocean Outfall. This contribution in aid of construction was increased from an original amount of \$52.5 million to \$101.8 million in August 1995 and is projected to be received over the period of the Financing Plan. In addition to this major award, the Financing Plan also includes several smaller contributions in aid of construction for other projects.

*Rate Stabilization Fund.* The analysis assumes that a rate stabilization fund will be used as described in the Bond Documents.

*Summary of Operating Revenue and Other Income.* The revenue projections discussed above are summarized in the following table on the next page. The table is summarized from Table 1-1A, Enclosure VIII-1 and presented in thousands of dollars.

VIII. FINANCING PLAN

Fiscal Year	1996	1997	1998	1999	2000	2001	2002	2003	Total	%
<u>Operating Revenues</u>										
Service charge revenues	133,007	143,546	154,842	167,464	183,016	200,314	220,785	241,639	1,444,613	62
Sewage treatment plant services <sup>(A)</sup>	26,323	27,961	31,535	31,760	33,569	35,848	37,522	39,834	264,352	13
Other <sup>(B)</sup>	2,478	2,556	2,643	2,735	2,828	2,926	3,031	3,141	22,338	1
<b>Total Operating Revenues</b>	<b>161,808</b>	<b>174,063</b>	<b>189,020</b>	<b>201,959</b>	<b>219,413</b>	<b>239,088</b>	<b>261,338</b>	<b>284,614</b>	<b>1,731,303</b>	<b>76</b>
<u>Other Income</u>										
Sewage treatment plant services <sup>(C)</sup>	7,299	11,604	11,738	13,432	21,527	15,491	14,975	15,047	111,113	5
Interest earnings	17,957	19,123	19,544	20,782	21,060	19,827	17,905	16,108	152,306	6
Capacity charge	15,396	16,166	16,974	17,823	18,714	19,650	20,632	21,664	147,019	6
Grants	28,712	14,217							42,929	2
Contributions in aid	16,422	49,231	42,227	2,699	1,954	1,597	1,354	1,354	116,838	5
Rate stabilization fund	(4,500)	(20,000)	(10,000)	12,000	10,000	8,000	(2,500)	(10,000)	(17,000)	0
<b>Total Other Income</b>	<b>81,286</b>	<b>90,341</b>	<b>80,483</b>	<b>66,736</b>	<b>73,255</b>	<b>64,565</b>	<b>52,366</b>	<b>44,173</b>	<b>553,205</b>	<b>24</b>
<b>Total Operating Revenues and Other Income</b>	<b>243,094</b>	<b>264,404</b>	<b>269,503</b>	<b>268,695</b>	<b>292,668</b>	<b>303,653</b>	<b>313,704</b>	<b>328,787</b>	<b>2,284,508</b>	<b>100</b>

(A) excludes reimbursement of capital costs

(B) "Other" Operating Revenue includes: New Sewer Connections, Sludge Handling Charge, Services Rendered to Others, Sale of Electricity/Gas Engine Generation, and Other Revenue.

(C) reimbursement of capital costs

VIII. FINANCING PLAN

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C.2 EXPENDITURES

The O&M and CIP budgets considered in the Financing Plan are discussed above in Section III, Engineering; Section VI, O&M; and Section VII, Cost Estimation.

C.3 DEBT SERVICE AND COVERAGE

The assumptions in the Financing Plan concerning future series of bonds to be issued to fund capital improvements include an annual interest rate of 6.5 percent in FY 1996 and 7.0% thereafter, a term of thirty years, a debt service reserve fund equal to the maximum annual debt service, and a debt service coverage test of net system revenues equal to a minimum 1.2 times maximum annual debt service.

The debt service coverage test is required for the issuance of parity bonds. A two part test must be passed to issue parity bonds:

- 1) Net system revenues for any twelve consecutive months of the eighteen (18) months preceding a subsequent bond issue must be at least 1.2 times maximum annual debt service on all bonds outstanding prior to the subsequent issue, and;
- 2) estimated net system revenues for the twelve months following a bond issue must be at least 1.2 times maximum annual debt service of all bonds then outstanding.

In substance, debt service coverage on existing debt must be at least 1.2 times maximum annual debt service and debt service coverage on the combined existing and proposed debt issues must be at least 1.2 times maximum annual debt service on the combined issues. Estimated future net system revenues are used for the second test.

The Team has concluded that projected net system revenues available for debt service are adequate to pay debt service and meet debt service coverage requirements for each year of the projection period based upon a review of the reasonableness of various underlying assumptions contained in the Financing Plan. The adequacy of net system revenues available for debt service and debt service coverage for the City Sewer Revenue Fund for each year of the projection period as included in the Financing Plan is shown on Table 1-1A, included as Enclosure VIII-1A.

C.4 COMPARABLE PROGRAMS

The fees and charges in the Financing Plan were compared with fees and charges of other municipal wastewater programs. In general, there are no directly comparable programs and, therefore, no conclusion can be made regarding the fees and charges of this program versus fees and charges of other programs. This is because each program is unique, is designed and engineered to local circumstances and topography, is funded from differing sources, is at different stages of development of the treatment system and the community being served, and may have been partially subsidized by federal grant funding which may no longer be available.

VIII. FINANCING PLAN

The Table below presents a comparison of the City's FY 1993/1994 connection fees and average monthly residential sewer bill with that of other communities in California for FY 1993/1994.

**COMPARISON OF CONNECTION FEES AND  
AVERAGE MONTHLY SEWER SERVICE CHARGES**

City <sup>(1)</sup>	Sewer Service Charge <sup>(3)</sup>	Connection Fee <sup>(2)</sup>
San Diego	\$ 21.61	\$6,033
Los Angeles	20.75	3,416
Bakersfield	8.75	900
Escondido	14.15	5,480
Fresno	11.19	2,110
Glendale	16.60	1,565
Oceanside	18.31	1,565
Riverside	13.05	2,684
Sacramento	18.67	123
San Bernardino	11.90	4,912
San Francisco	20.14	0
San Jose	17.39	780
San Mateo	0.00	1,498
Santa Monica	17.71	1,981
Santa Rosa	31.23	3,000
Vallejo	<u>19.85</u>	<u>1,590</u>
Average (w/o San Mateo/San Francisco)	<u>\$17.42</u>	<u>\$2,509</u>

Source: State Water Resources Control Board (1993/94 Data)

- (1) Selected cities serving areas with population in excess of 100,000.
- (2) Fee for a single-family dwelling.
- (3) Average Charge.

A similar list of cities was included in the July 1, 1993 Engineer's Statement of Feasibility. The comparable averages for sewer service charges and connection fees were \$15.39 and \$2,262, respectively. The current averages represent 13% and 11% increases, respectively, over the averages of two years ago.

The review of fees and charges of other programs does indicate that sewer service charges and connection fees are increasing and that the fees and charges assumed in the Financing Plan are within, but at the upper end, of the range of fees and charges set by other programs.

VIII. FINANCING PLAN

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**D. Conclusion**

The Financing Plan presents the City's projection of revenues, O&M expenses, annual debt service requirements, coverage requirements, and capital expenditures through FY 2003. Projections in the Financing Plan are based on the City's assumptions regarding inflationary increases, long-term debt interest rates, estimates of additional O&M expenses related to new or upgraded facilities, and estimates of construction costs of the planned CIP facilities and are therefore subject to change.

The Team has concluded that the City's revenue assumptions and resulting projected revenues in the Financing Plan are reasonable. The Team has also concluded that the projected revenues, debt issues, and other sources of funds are adequate to fund projected O&M expenses, annual debt service requirements, coverage requirements, administrative expenses, payments to reserve funds and capital expenditures. The Team has reviewed the Financing Plan and the assumptions and, based on current expected conditions during the projection period, has concluded that the Financing Plan is feasible.

VIII. FINANCING PLAN

TABLE 1-1  
CITY OF SAN DIEGO SEWER REVENUE FUND  
REVENUE AND EXPENDITURES STATEMENT  
(Escalated Dollars in Thousands)

DESCRIPTION	Fiscal Year >	actual 1994	actual* 1995	projected>> 1996	1997	1998	1999	2000	2001	2002	2003
<b>REVENUES</b>											
Balance from Prior Year		29,121	151,502	37,775	76,949	28,905	25,060	83,171	123,037	84,046	40,788
Prior Year Encumbrances & Continuing Appropriations (a)		152,492	181,867	212,207	262,702	163,438	166,376	127,857	80,095	86,740	88,033
Bond Proceeds		225,810	0	318,823	194,411	187,665	147,265	68,644	0	0	0
Service Charge Revenues		124,147	130,961	133,007	143,546	154,842	167,464	183,016	200,314	220,785	241,639
New Sewer Connections		83	113	110	112	113	115	117	119	121	123
Sewage Treatment Plant Services		26,253	37,755	33,621	39,564	43,273	45,191	55,096	51,339	52,497	54,881
Sludge Handling Charge		143	224	357	358	366	374	379	385	392	400
Interest Earnings		12,534	15,969	21,160	22,490	21,890	22,623	21,918	19,827	17,905	16,108
Services Rendered to Others		1,473	256	237	249	261	274	288	302	317	333
Trunk Line Sewer Area Charges		0	0	0	0	0	0	0	0	0	0
Capacity Charge		15,137	11,369	15,396	16,166	16,974	17,823	18,714	19,650	20,632	21,664
Sale of Power from Co-Generation		342	5	350	368	386	405	425	447	469	492
Contributions in Aid of Construction		1,367	3,676	16,422	49,231	42,227	2,699	1,954	1,597	1,354	1,354
Reclaimed Water Sales		0	0	0	0	0	0	0	0	0	0
Transfer Payments from External Funds (b)		0	0	0	0	0	0	0	0	0	0
Other Revenue		1,939	1,590	1,424	1,469	1,517	1,567	1,619	1,674	1,732	1,793
<b>TOTAL REVENUE</b>		<b>590,842</b>	<b>535,286</b>	<b>790,889</b>	<b>807,614</b>	<b>661,858</b>	<b>597,235</b>	<b>563,199</b>	<b>498,786</b>	<b>486,991</b>	<b>467,608</b>
<b>EXPENDITURES</b>											
Capital Improvement Expenditures		139,428	178,271	308,504	411,828	229,996	149,302	101,780	54,928	64,553	72,564
Capital Improvement Encumbrances		151,448	158,740	254,333	163,347	152,747	114,130	70,768	78,459	83,098	71,028
Debt Service		9,964	16,322	29,723	51,761	68,736	83,617	93,209	96,259	96,259	96,259
Operating & Maintenance Expenses		111,152	114,717	135,474	143,709	159,484	164,435	173,688	183,371	193,375	203,848
Continuing Appropriations		26,384	53,466	8,369	91	13,629	13,727	9,327	8,282	4,935	7,287
Accrued Annual Leave & Sick Leave		539	350	350	250	250	250	250	250	250	250
Transfer Payments to External Funds (b)		0	0	0	0	0	0	0	0	0	0
Bond Redemption/Defeasance Escrow		12,504	0	0	0	0	0	0	0	0	0
<b>TOTAL EXPENDITURES</b>		<b>451,418</b>	<b>521,867</b>	<b>736,753</b>	<b>770,987</b>	<b>624,842</b>	<b>525,461</b>	<b>449,022</b>	<b>421,548</b>	<b>442,471</b>	<b>451,236</b>
<b>BALANCE</b>											
Grants		(24,090)	(26,658)	(28,712)	(14,217)	0	0	0	0	0	0
Rate Stabilization Fund Transfer		0	0	4,500	20,000	10,000	(12,000)	(10,000)	(8,000)	2,500	10,000
Transfer to Operating Reserve		12,012	2,303	1,399	1,939	1,956	603	1,139	1,192	1,232	1,289
<b>Funds Available for Appropriation</b>		<b>151,502</b>	<b>37,775</b>	<b>76,949</b>	<b>28,905</b>	<b>25,060</b>	<b>83,171</b>	<b>123,037</b>	<b>84,046</b>	<b>40,788</b>	<b>5,082</b>
<b>TOTAL BALANCE</b>		<b>139,424</b>	<b>13,419</b>	<b>54,136</b>	<b>36,627</b>	<b>37,016</b>	<b>71,774</b>	<b>114,176</b>	<b>77,238</b>	<b>44,520</b>	<b>16,372</b>
<b>TOTAL EXPENSE &amp; BALANCE</b>		<b>590,842</b>	<b>535,286</b>	<b>790,889</b>	<b>807,614</b>	<b>661,858</b>	<b>597,235</b>	<b>563,199</b>	<b>498,786</b>	<b>486,991</b>	<b>467,608</b>
<b>BALANCE AVAILABLE FOR APPROPRIATION</b>											
Beginning of the Year		29,121	151,503	37,775	76,950	28,905	25,059	83,172	123,037	84,046	40,789
Increase/(Decrease)		122,382	(113,727)	39,174	(48,045)	(3,845)	58,112	39,866	(38,991)	(43,257)	(35,706)
End of the Year		151,503	37,775	76,950	28,905	25,059	83,172	123,037	84,046	40,789	5,083

Notes:

(a) Fiscal year 1995 only, includes cancellations of prior year operating encumbrances.

(b) Excludes any transfers included in Operations and Maintenance.

VIII. FINANCING PLAN

TABLE 1-1A  
CITY OF SAN DIEGO SEWER REVENUE FUND  
OPERATING REVENUES AND EXPENDITURES  
(Escalated Dollars in Thousands)

DESCRIPTION	Fiscal Year >	projected>>	1996	1997	1998	1999	2000	2001	2002	2003
<b>REVENUES</b>										
Service Charge Revenues		133,007	143,546	154,842	167,464	183,016	200,314	220,785	241,639	
New Sewer Connections		110	112	113	115	117	119	121	123	
Sewage Treatment Plant Services		26,323	27,961	31,535	31,760	33,569	35,848	37,522	39,834	
Sludge Handling Charge		357	358	366	374	379	385	392	400	
Services Rendered to Others		237	249	261	274	288	302	317	333	
Sale of Power from Co-Generation		350	368	386	405	425	447	469	492	
Other Revenue		1,424	1,469	1,517	1,567	1,619	1,674	1,732	1,793	
<b>TOTAL REVENUE</b>		<b>161,808</b>	<b>174,062</b>	<b>189,021</b>	<b>201,959</b>	<b>219,414</b>	<b>239,089</b>	<b>261,338</b>	<b>284,613</b>	
<b>OPERATING EXPENSES</b>										
Operation & Maintenance Expenses		135,474	143,709	159,484	164,435	173,688	183,371	193,375	203,848	
<b>TOTAL OPERATING EXPENSES</b>		<b>135,474</b>	<b>143,709</b>	<b>159,484</b>	<b>164,435</b>	<b>173,688</b>	<b>183,371</b>	<b>193,375</b>	<b>203,848</b>	
<b>OPERATING INCOME</b>		<b>26,333</b>	<b>30,353</b>	<b>29,536</b>	<b>37,524</b>	<b>45,726</b>	<b>55,718</b>	<b>67,963</b>	<b>80,765</b>	
<b>OTHER INCOME &amp; (CHARGES)</b>										
Sewage Treatment Plant Services		7,299	11,604	11,738	13,432	21,527	15,491	14,975	15,047	
Trunk Line Sewer Area Charges		0	0	0	0	0	0	0	0	
Interest Earnings (a)		17,957	19,123	19,544	20,782	21,060	19,827	17,905	16,108	
Capacity Charge		15,398	16,166	16,974	17,823	18,714	19,850	20,832	21,664	
Grants (b)		28,712	14,217	0	0	0	0	0	0	
Contributions in Aid		16,422	49,231	42,227	2,699	1,954	1,597	1,354	1,354	
Rate Stabilization Fund Transfer		(4,500)	(20,000)	(10,000)	12,000	10,000	8,000	(2,500)	(10,000)	
<b>TOTAL OTHER INCOME</b>		<b>81,286</b>	<b>90,340</b>	<b>80,483</b>	<b>66,735</b>	<b>73,255</b>	<b>64,565</b>	<b>52,367</b>	<b>44,173</b>	
<b>NET REVENUE AVAILABLE FOR DEBT SERVICE</b>		<b>107,619</b>	<b>120,693</b>	<b>110,019</b>	<b>104,259</b>	<b>118,981</b>	<b>120,283</b>	<b>120,329</b>	<b>124,938</b>	
<b>ADDITIONAL CHARGES</b>										
Contributions to Operating Reserve		1,399	1,939	1,956	603	1,139	1,192	1,232	1,289	
Emergency Reserve		0	0	0	0	0	0	0	0	
Debt Service		29,723	51,761	68,736	83,617	93,209	96,259	96,259	96,259	
Addition to Continuing Appropriations		50,496	0	2,937	0	0	6,645	1,293	0	
Inc./Dec. in Funds Available for Appropriation		39,174	(48,045)	(3,845)	58,112	39,866	(38,991)	(43,257)	(35,706)	
Addition to Accrued Annual Leave & Sick Leave		350	250	250	250	250	250	250	250	
Transfer/Payments to External Funds		0	0	0	0	0	0	0	0	
<b>TOTAL ADDITIONAL CHARGES</b>		<b>121,142</b>	<b>5,905</b>	<b>70,035</b>	<b>142,582</b>	<b>134,464</b>	<b>65,356</b>	<b>55,777</b>	<b>62,093</b>	
<b>NET REVENUE AVAILABLE FOR SYSTEM ASSETS</b>		<b>(13,522)</b>	<b>114,788</b>	<b>39,985</b>	<b>(38,323)</b>	<b>(15,484)</b>	<b>54,927</b>	<b>64,553</b>	<b>62,845</b>	
<b>COVERAGE TESTS</b>										
Net System Revenue		107,619	120,693	110,019	104,259	118,981	120,283	120,329	124,938	
New Bonds System Revenue (c)		121,906	110,356	96,139	112,620	120,632	125,558	126,384	124,938	
Annual Debt Service		29,723	51,761	68,736	83,617	93,209	96,259	96,259	96,259	
New Bonds Maximum Annual Debt Service (d)		43,124	60,399	77,074	90,160	96,259	96,259	96,259	96,259	
<b>DEBT SERVICE COVERAGE</b>		<b>3.62</b>	<b>2.33</b>	<b>1.60</b>	<b>1.25</b>	<b>1.28</b>	<b>1.25</b>	<b>1.25</b>	<b>1.30</b>	
<b>NEW BONDS COVERAGE</b>		<b>2.83</b>	<b>1.83</b>	<b>1.25</b>	<b>1.25</b>	<b>1.25</b>	<b>1.30</b>	<b>1.31</b>	<b>1.30</b>	

Notes:

- (a) - Excludes interest on Construction Fund.
- (b) - Grant "Change in Anticipated Contributions" used as proxy for grant receipts
- (c) - Computed as 1/2 of current and 1/2 of subsequent years' Net Revenue Available for Debt Service, exclusive of Rate Stabilization Fund transfer, 100% of which is included in year of transfer
- (d) - Assumes both bi-annual debt service payments are made in year of issuance.

VIII. FINANCING PLAN

TABLE 1-1B  
CITY OF SAN DIEGO SEWER REVENUE FUND  
CAPITAL SOURCES AND USES STATEMENT  
(Escalated Dollars in Thousands)

DESCRIPTION	Fiscal Year >	projected>>							
		1996	1997	1998	1999	2000	2001	2002	2003
SOURCE OF FUNDS FOR CAPITAL EXPENDITURES									
Funds from Prior Year Appropriation		0	99,264	0	38,519	47,762	0	0	9,719
Bond Issue		350,000	214,365	206,926	162,380	75,689	0	0	0
Interest Earnings (a)		3,203	3,365	2,346	1,842	858	0	0	0
Reimbursement of Prior Year Expenditures		29,208	0	0	0	0	0	0	0
Net Revenue Available for System Assets (b)		(13,522)	114,788	39,985	(38,323)	(15,484)	54,928	64,553	62,845
TOTAL SOURCES		368,889	431,782	249,257	164,418	108,825	54,928	64,553	72,564
USE OF FUNDS									
Capital Improvement Expenditures		308,504	411,828	229,996	149,302	101,780	54,928	64,553	72,564
Reimbursement of Prior Year Expenditures		29,208	0	0	0	0	0	0	0
Debt Service Reserve Fund		26,802	17,275	16,675	13,086	6,100	0	0	0
Issue Costs		4,375	2,679	2,586	2,030	945	0	0	0
Bond Redemption/Defeasance Escrow		0	0	0	0	0	0	0	0
TOTAL USES		368,889	431,782	249,257	164,418	108,825	54,928	64,553	72,564

Notes:

(a) - Interest on construction fund.

(b) - Source: Table 1-1A.



## APPENDIX A DOCUMENTS REVIEWED

1. *Project Report for Modifications to the Metropolitan Sewerage System*, Program Manager, May 1990, Executive Summary and Volumes 1 through 9.
2. "Partial Consent Decree," not entered, dated January 1990, including:  
Attachment B, Operations and Maintenance Budget Data,  
Attachment C, Capital Improvements Projects - Detail Summary,  
Attachment F, Specific CIP support facilities schedule and data sheet.
3. Transcript of Proceedings, Court Order dated April 3, 1991.
4. "Construction Management Division Organization Chart." (est. March 1993).
5. Senate Bill No. 1225 dated March 8, 1991, as amended, "San Diego Area Wastewater Management District Act."
6. "Report to the Honorable Mayor and City Council," City Attorney, dated June 5, 1991.
7. "Report to the Honorable Mayor and City Council," City Attorney, dated August 30, 1994.
8. Memo, Federal Court Ruling..., Deputy City Manager Frauenfelder, dated June 6, 1991.
9. "Chapter 4, Cost Estimating Guidelines," *Program Guidelines for Design Consultant*, Draft version dated November 21, 1991.
10. *Otay Valley Reclamation Plant Predesign Report*, Volumes I & II.
11. Letter Report by the Clean Water Program Special Committee dated November 19, 1991.
12. Minutes of the Governance Advisory Group Meetings of November 1, 1991, and December 6, 1991.
13. Exhibit A, "Scope of Work," to the Program Manager's Contract with the City of San Diego.
14. Discharge Permit NPDES No. CA 0107409 via California Regional Water Quality Control Board letter dated January 16, 1991.

APPENDIX A

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15. "Functional Organization Chart for the [Water Reclamation] Division, "dated January 2, 1992.
16. "Program Manager Support Staff Organization Chart."
17. Clean Water Program Organization Charts - For FY 1993 (7 pages), dated February 10, 1993.
18. City of San Diego, Sewer Enterprise Fund, Financing Plan, Fiscal years 1996-2003, August 1995.
19. Baseline Plan for Residuals Management Presentation by Harold Bailey at the December 6, 1991, meeting of the Governance Advisory Group.
20. Memos October 28, 1994 - Allocation of Waste Water Flow to User Classifications.
21. California Regional Water Quality Control Board, San Diego Region, NPDES Permit No. CA0107409 for E.W. Blom Point Loma Metropolitan Wastewater Treatment Plant, January 16, 1991.
22. California Regional Water Quality Control Board, San Diego Region, Monitoring and Reporting Program No. 85-16 for City of San Diego Point Loma Ocean Outfall, San Diego County.
23. California Regional Water Quality Control Board, San Diego Region, Adoption of Order No. 88-34 "Waste Discharge Requirements for the City of San Diego Fiesta Island Sludge Drying Facility, San Diego County," April 28, 1991.
24. Metropolitan Sewerage System, San Diego, California, "Industrial Waste Program Guidance for Industrial Users."
25. City of San Diego, Water Utilities Department, Sewer Fund Budgets, 1995/1996.
26. City of San Diego, Water Utilities Department, Maps of Metropolitan Service Area and Metropolitan Sewer System.
27. City of San Diego, Typical Industrial Discharge Permit.
28. City of San Diego Pretreatment Regulations, San Diego Municipal Code, Sections 64.0200 - 64.0810.

APPENDIX A

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29. City of San Diego, Water Utilities Department, Annual Financial Report 1994
30. Clean Water Program Special Committee Report to the Mayor and City Council of San Diego - November 19, 1991.
31. City of San Diego, Water Utilities Department, Engineering Division, Consent Decree Project Schedule (Bar Chart 1990 - 1997).
32. Clean Water Program for Greater San Diego Program Manager (PM) Support Staff Operational Organization (July 15, 1991).
33. Clean Water Program, "Project Report, Volume 1 - Basis of Project Development (May 1990)" Chapter 8 - Basis of Cost Estimates (excerpts).
34. Summary of Metropolitan/CWP Estimated Staffing (Date July 12, 1991) received from Alice Benson (CWP) December 19, 1991.
35. Summary of O&M Facility Staffing by Subsystem, January 10, 1992 (received from Alice Benson March 27, 1992).
36. Summary of Metropolitan/Tech Serv/CWP/Muni O&M Expenses, December 19, 1991 (received from Alice Benson March 27, 1992).
37. City of San Diego, Clean Water Program, "Survey of O & M Organizational Structure and Staffing, August, 1991."
38. City of San Diego and La Mesa, "Sewage Disposal Agreement of 1960," Document No. 625491.
39. United States Environmental Protection Agency, *Estimating Staffing for Municipal Wastewater Treatment Facilities*, Contract No. 68-01-0328, March, 1973.
40. City of Phoenix, Arizona, "Water and Wastewater Operations Survey," received from Sharon Cayman at the City of Phoenix, Water and Wastewater Department on December 20, 1991.
41. "Waste Water User Charge Survey, FY 1993-1994 Data," California State Water Resources Control Board, Division of Clean Water Programs.
42. "Project Coordination Chart," CWP, March 5, 1993.

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43. Memorandum, S. Hamilton and D. Vitkus, Subj: Project Manager - Construction Manager Roles & Responsibilities During Construction, June 9, 1992.
44. Executive Summary Report - Reclaimed Water Distribution System, Master Plans for Northern, Central and Southern Service Areas, City of San Diego, dated November 1992, Clean Water Program.
45. Final Design Plans & Specifications - Carmel Valley Trunk Sewer Replacement & Sorrento Valley Water Main Replacement.
46. Final Design Plans & Specifications - Pump Station No. 65 and Force Main.
47. Volume I, Chapters 1 thru 17, Program Guidelines for Design Consultant, Latest Revision February, 1992.
48. Volume IV, Appendix 'A', Standard Details & Drawings - Program Guidelines for Design Consultants, Latest Revision February 1992.
49. Volume V, Appendix B, Preparation Guide and Master Construction Specifications Divisions 0 through 10. Program Guidelines for Design Consultant, Latest Revision February 1992.
50. Volume VIII, Appendix D, Design Guidelines, Program Guidelines for Design Consultant, Latest Revision February 1992.
51. Value Engineering Report - North City Pipeline Projects by Kramer, Chin & Mayo dated September 1991.
52. Memorandum to City Council from City Manager. Subject: Revised Clean Water Program Alternative (Consumers' Alternative). Reclaimed Water Analysis - dated May 21, 1992.
53. "Chapter 4, Cost Estimating Guidelines," Program Guidelines for Design Consultant, version dated February 1992.
54. "Section 7.2.3, Contract Specific Tasks w/ sub section 7.2.3.4, Changes and Claims," Construction Manager's Procedures, dated April 11, 1994.
55. "Article 9, Construction Manager's Status During Construction, Article 10, Changes in the Work, Article 11 Change in Contract Price and Article 16, Disputes," Contract Documents for North City Raw Sludge pumping Station, Volume 1, Bid No. K95110, Specification No. 95-013, Job Order No. 199380, CIP No. 42911.3, dated January 1995 (Rev. 2.0).

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56. Construction Cost Estimate - Final Engineer's Estimate, North Metropolitan Interceptor Project - Phase 2 Class "A" Estimate, By Montgomery Watson, dated June 28, 1995.
57. Construction Cost Estimate - Final Design, Point Loma Wastewater Treatment Plant, Point Loma Sludge Pumping Station, by Metcalf & Eddy, Inc., dated November 23, 1994.
58. Construction Cost Estimate - Final Estimate, Fiesta Island Replacement Project/Northern Sludge Processing Facility, Yard Piping and Power Distribution, by Metcalf & Eddy, Inc., dated September 22, 1994.
59. Construction Cost Estimate - 90% Design, Fiesta Island Replacement Project/Northern Sludge Processing Facility, Energy Building/Wastewater Pump Station, by Metcalf & Eddy, Inc., dated October 21, 1994.
60. Construction Cost Estimate - Final Design, Fiesta Island Replacement Project/Northern Sludge Processing Facility, Site Development, by Metcalf & Eddy, Inc., dated May 17, 1994.
61. Construction Cost Estimate - 60% Submittal, University Subsystem, Backbone System, prepared by Project Design Consultants, dated July 7, 1995.
62. Construction Cost Estimate - 100% Design, East Portal Forcemain Isolation Structure, by Malcolm Pirnie, dated July 5, 1995.
63. Construction Cost Estimate - 30% Design, Reclaimed Water Distribution Project V-B, Scripps Ranch Blvd./I-15 Subsystem, by Metcalf & Eddy, Inc., dated January 9, 1995.
64. Construction Estimate - 90% Design Submittal, North City Sludge and Water Pipelines, Part-2, by Lee & Ro Consulting Engineers, Inc., dated April 17, 1995.
65. Construction Cost Estimate - 90% Design Submittal, Miramar Road Subsystem - Reclaimed Water Distribution System, by Lee & Ro Consulting Engineers, Inc., dated August 10, 1994.
66. Construction Cost Estimate - 90% Design Submittal, North City Water Reclamation Plant, by CH2M Hill and Associates, dated December 12, 1992.
67. Construction Cost Estimate - 100% Estimate, North City Water Reclamation Plant, Facility 05, Headworks, by CH2M Hill and Associates, dated March 12, 1993.

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68. Construction Cost Estimate - 100% Estimate, North City Water Reclamation Plant, Facility 15, Aeration Basins and Blower Gallery, by CH2M Hill and Associates, dated March 12, 1993.
69. Construction Bid Milestone Report for July 31, 1995, City of San Diego, MWWD.
70. Changes Status Report (all Sites), Construction Contract, City of San Diego, MWWD.
71. "Program Management Division Monthly Cost and Schedule," Program Summary, Project Reports, Report Definitions and Glossary, January, May and June 1995.
72. "Construction Management Status Report," Sverdrup and Kaiser Engineers, May, June and July 1995.
73. Schedule Update December 31, 1994, "FIRP/NSPF," Metcalf and Eddy - Computer Printout & Diskette.
74. Schedule Update, "Level 2 Detail - Revised 1/30/95, FIRP/NSPF" - Computer Printout.
75. Schedule Update April 25, 1995, "Task Level Bar Chart, Pt. Loma North Operations Building" - Computer Printout and Diskette.
76. Schedule Update July 19, 1995, "Nielson Update #14 (01 Jun 95 - 30 Jun 95), Pt. Loma Sed. Basin #11 and #12" - Computer Printout and Diskette.
77. Schedule Update June 5, 1995, "Pt. Loma - Power Gen & Dist. Upgrade Summary Barchart" - Computer Printout.
78. Schedule Update September 30, 1994, "Pt. Loma Sludge Pump Station" - Computer Diskette.
79. Schedule Update June 19, 1995, "North City Headworks & Prim. Sed." - Computer Diskette.
80. Schedule Update June 5, 1995, "North City Aeration Basin" - Computer Diskette.
81. Schedule Update #2 July 1, 1995, "Yard Piping & Power Distrib. FIRP Yard Piping" - Computer Diskette.
82. "North City Water Reclamation Plant Progress Report No. 14," CH2M Hill, December 1992.

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83. Specification Section 01310 - Progress Schedule.
84. Metropolitan Wastewater Department Operation and Maintenance Division FY95 Division Organizational Charts, Deputy Director Toth, dated April 17, 1995.
85. Metropolitan Wastewater Department Operation and Maintenance Division FY 96 Division Organizational Charts, Deputy Director Toth, dated July 27, 1995 (Draft).
86. Manager's Report, Proposed Metropolitan Wastewater Plan, City Manager McGrory, dated June 7, 1995.
87. Operations and Maintenance Support Services, Review of O&M Staffing Requirements, OSI. February 1995.
88. Proposed Metropolitan Wastewater Plan - Internal Working Document, Program Manager/Metropolitan Wastewater Department April 1995.
89. Memorandum, Allocation of Wastewater Flow to User Classifications, Director D. Schlesinger, dated October 28, 1994.
90. City of San Diego, Sewer Enterprise Fund, Preliminary Financing Plan, Fiscal Years 1996 - 2003 - Draft August, 1996.
91. City of San Diego FY 1996 Proposed Annual Budget, Department Detail Volume III, various pages relating to Metropolitan Wastewater Department and Water Utilities Department Wastewater Collection Division.
92. FY 1995 Budget Information for Water Utilities Department Wastewater Collection Division.
93. FY 1996 Budget information for Water Utilities Department Wastewater Collection Division.
94. Actual FY 1995 Allocations for Metropolitan Wastewater Department Operations and Maintenance Division.
95. Metropolitan Wastewater Department Operations and Maintenance Division, Draft Staffing and Recruitment Plan, January 1995.
96. Design Engineering Status Report (based on a request to Jeff Bessa, Manager of Program and Construction Controls), August 1995.

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97. Monthly Project Critical Path Update Reports, July 1995.
98. Construction Phasing and Startup Schedule, Status Date June 1, 1995.
99. Construction Bid Milestone Report, August 7, 1995.
100. Contract Change Order No. 16, North City Water Reclamation Plant - Influent Pump Station Substructure.
101. Contract Change Order No. 3, North City Water Reclamation Plant - Operation Building.
102. Contract Change Order No. 3, North City Water Reclamation Plant - Chlorine Contact Tanks and Effluent Pump Station Substructure.
103. Memorandum dated October 28, 1994, entitled "Allocation of Wastewater Flows to User Classification."
104. Financial and Technical Services Organizational Charts dated May 23, 1995.
105. Sewer Fund, Revenue and Expense Statements, Estimated 1994-1995.



APPENDIX B

## APPENDIX B GLOSSARY OF TERMS

Annual Allocation	Annual Allocation - Point Loma Wastewater Treatment Plant and Related Facilities
Bond Documents	The Indenture and Installment Purchase Agreement.
Centrate Pipeline	FIRP Phase II Digested Sludge and Centrate Pipeline
CIP	Capital Improvement Program
City	The City of San Diego and/or the Public Facilities Funding Authority of the City of San Diego
Clean Water Program	A previous organization (no longer exists) within the City with the responsibility to plan, design, and construct those portions of the Consumers' Alternative which are not a portion of the Metropolitan or Municipal Capital Programs (except for certain projects for which the Water Utilities Department has assigned responsibility to the Clean Water Program), now known as the Metropolitan Wastewater Department
CM	Construction Manager
COMNET	Wastewater Operations Management Network
Construction Manager	Sverdrup/ICF Kaiser Engineers provides construction management (monitoring, reporting, etc.) as a consultant to the City through the Construction Management Division of the MWW. This Division is responsible for bidding and constructing the new facilities.

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Consumers' Alternative	A capital improvement program for specific improvements to the Municipal and Metropolitan Sewerage Systems.
Digester 7&8	Point Loma Digester Facility Upgrade and Expansion
District	San Diego Area Wastewater Management District
EDU	Equivalent Dwelling Unit
FIRP	Fiesta Island Replacement Project
FY	Fiscal Year
HOG	Point Loma Headworks, Odor Control & Grit Processing Facility
Imposed Milestone dates	Completion dates for certain facilities as ordered by either the courts or regulatory agencies
Indenture	Means the Indenture, dated as of September 1, 1993, between the Public Facilities Financing Authority of the City of San Diego and the Trustee, as originally executed and as it may from time to time be amended or supplemented by all Supplemental Indentures executed pursuant to the provisions thereof.
Installment Purchase Agreement	The Master Installment Purchase Agreement, dated as of September 1, 1993, entered into between the Public Facilities Financing Authority of the City of San Diego, as seller, and the City, as purchaser, as originally executed and as it may from time to time be amended or supplemented pursuant to the provisions thereof.
Interim Order	United States District Court Order filed on August 26, 1994, which establishes certain obligations such as completion dates for construction projects, effluent limits, and sewage spill reductions.

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Metropolitan Capital Improvement Program	A capital improvement program for capital improvements to the Metropolitan Sewerage System which includes certain specific projects of the Metropolitan Wastewater Plan as well as other projects.
Metropolitan System	The regional conveyance and treatment system for sewage of the City and each Participating Agency. The regional conveyance system begins at the end of the City's and each Participating Agency's local collection and conveyance system.
Metropolitan Wastewater Department (MWWD)	A department within the City with the responsibility to design, bid, & construct wastewater facilities. The Department also operates and maintains these facilities.
Metropolitan Wastewater Plan (the Program)	A capital improvement program for capital improvements to the Municipal & Metropolitan Sewerage Systems which includes parts of the Consumers' Alternative.
MGD	Million gallons per day
MGWRP	Mission George Water Reclamation Plant
MOC	Metropolitan System Operation Systems
Municipal Capital Improvement Program	A capital improvement program for capital improvements to the Municipal Sewerage System which includes certain specific projects of the Metropolitan Wastewater Plan as well as other projects.
Municipal System	The collection and conveyance system for sewage of City users which connects to the Metropolitan Sewerage System.
MVWRP	Mission Valley Water Reclamation Plant
MWWD	The Metropolitan Wastewater Department.

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NCWRP	North City Water Reclamation Plant
NMI	North Metro Interceptor
NPE	Nonpersonnel expense
NSPF	Northern Sludge Processing Facility Phase II
NTP	The Notice-To-Proceed date
O&M	Operations and Maintenance
OCIP	Annual Allocation Owner Controller/Insurance Program
OVWRP	Otay Valley Water Reclamation Plant
Participating Agencies	The fourteen adjacent Cities that have entered into sewage disposal agreements with the City.
PLTO	Point Loma Tunnel Outfall
Point Loma Plant	The Point Loma Wastewater Treatment Plant
Program	The Wastewater Capital Improvement Program to upgrade the Wastewater system, including the Metropolitan Wastewater Plan, and other CIP's.
Program Manager (PM)	Montgomery - Watson Americas provides program management as a consultant to the City through the Program Management Division of the MWWD. This Division is responsible for the planning, design, bidding, and construction of the new facilities.
Report	The Engineer's Statement of Feasibility
SANDAG	San Diego Association of Governments
SBLO	South Bay Land Outfall

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SBOE	South Bay Outfall Extension
SBWRP	South Bay Water Reclamation/Secondary Plants
SEOC	South Effluent Outfall Channel
SMI	South Metro Sewer Rehabilitation
SSPF	South Bay Sludge Processing Facilities
SWRP	Santee Water Reclamation Plant
Team	The team of High-Point Rendel, Damon S. Williams Associates, and Lenax Construction Services, (the authors of this Engineer's Statement of Feasibility).
WUD	The Water Utilities Department of the City of San Diego
Water Utilities Department	A department within the City with the responsibility to manage the Municipal Sewerage Systems.
Wastewater System	All components of the City's sewer system, including the Municipal Sewerage System, the Metropolitan Sewerage System and any improvements thereto.

**APPENDIX B**

**AUDITED FINANCIAL STATEMENTS**

**OF THE**

**SEWERAGE UTILITY**

**FOR YEARS ENDED JUNE 30, 1993 AND JUNE 30, 1994**

**CALDERON, JAHAM & OSBORN**

AN ACCOUNTANCY CORPORATION

CERTIFIED PUBLIC ACCOUNTANTS

SYMPHONY TOWERS

750 "B" STREET, SUITE 1925

SAN DIEGO, CALIFORNIA 92101

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OFFICES

IN

SAN DIEGO

EL CENTRO

BRAWLEY

**INDEPENDENT AUDITORS' REPORT**

The Honorable Mayor, City Council  
and City Manager of the  
City of San Diego, California

We have audited the accompanying financial statements of the City of San Diego Sewerage Utility as of June 30, 1994 and 1993 and for the years then ended, listed as Exhibits A, B and C in the foregoing table of contents. These financial statements are the responsibility of the City of San Diego management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As described in Note 1 to the financial statements, the financial statements referred to above present only the Sewerage Utility Enterprise fund of the City of San Diego and are not intended to present the financial position of the City of San Diego, California and results of its operations and the cash flows of its proprietary and similar trust fund types, in conformity with generally accepted accounting principles.

In our opinion, such financial statements present fairly, in all material respects, the financial position of the City of San Diego Sewerage Utility at June 30, 1994 and 1993 and the results of its operations and its cash flows for the years then ended in conformity with generally accepted accounting principles.

The scope of our audits did not include the supplemental information listed as Exhibits D and F, Schedules and Tables listed in the foregoing table of contents. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we express no opinion on it.

Exhibit E, listed in the foregoing table of contents, is presented for purposes of additional analysis and is not a required part of the City of San Diego Sewerage Utility financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statement, taken as a whole.

November 10, 1994







# ***Sewerage Utility***

**BALANCE SHEETS, JUNE 30, 1994 AND 1993**

	June 30	
	1994	1993
<b>ASSETS</b>		
<b>UTILITY PLANT:</b>		
Sewerage Plant in Service.....	\$476,540,338	\$452,106,972
Construction Work in Process.....	610,174,025	488,301,630
Total.....	1,086,714,363	940,408,602
Less Accumulated Depreciation.....	129,686,445	119,918,045
<b>TOTAL UTILITY PLANT – NET.....</b>	<b>957,027,918</b>	<b>820,490,557</b>
<b>ADVANCES TO CITY OF SAN DIEGO INTERNAL SERVICE FUNDS (Note 4).....</b>	<b>6,884,232</b>	<b>6,577,617</b>
<b>CONSTRUCTION GRANTS RECEIVABLE.....</b>	<b>9,697,229</b>	<b>11,550,815</b>
<b>RESTRICTED ASSETS – BOND INTEREST AND REDEMPTION FUNDS:</b>		
Cash or Equity in Pooled Cash and Investments (Note 2).....	5,208	817,119
Cash with Custodian (Note 2).....	729,424	103,322
<b>TOTAL RESTRICTED ASSETS.....</b>	<b>734,632</b>	<b>920,441</b>
<b>DEFERRED CHARGES.....</b>	<b>6,732,762</b>	<b>0</b>
<b>CURRENT ASSETS:</b>		
Cash or Equity in Pooled Cash and Investments – Sewer Revenue Fund (Note 2).....	327,288,626	218,230,209
Accrued Interest Receivable.....	2,731,113	1,964,140
Accounts Receivable – Principally from Customers (Less Allowance for Doubtful Accounts of \$1,025,730 and \$1,044,266 Respectively).....	24,437,461	24,180,134
Prepaid Expenses.....	94,462,503	154,757
<b>TOTAL CURRENT ASSETS.....</b>	<b>448,919,703</b>	<b>244,529,240</b>
<b>TOTAL ASSETS.....</b>	<b>\$1,429,996,476</b>	<b>\$1,084,068,670</b>

See Notes to Financial Statements.

# Sewerage Utility

EXHIBIT A

## LIABILITIES AND EQUITY

### LONG-TERM DEBT:

	June 30	
	1994	1993
Sewer Revenue Bonds - (Note 3).....	\$0	\$12,797,000
Installment Purchase Agreement.....	242,785,000	0
Loan Payable.....	100,000	100,000
Total.....	242,885,000	12,897,000
Less Due Within One Year.....	0	2,410,000
TOTAL LONG-TERM DEBT.....	242,885,000	10,487,000

### CURRENT LIABILITIES:

Obligations Under Reverse Repurchase Agreements.....	41,897,956	23,723,346
Accounts Payable.....	7,560,063	16,004,604
Accrued Payroll.....	2,113,882	1,676,627
Accrued Annual Leave and Sick Leave.....	2,867,664	2,328,708
Accrued SPSP Contributions Payable.....	151,597	126,333
Due to Other Funds.....	1,000,000	1,500,000
Liability Claims.....	3,021,473	1,003,891
Matured Long-Term Debt.....	673,785	58,250
Interest Matured on Long-Term Debt.....	55,639	45,072
Interest Accrued on Long-Term Debt.....	0	72,334
Long-Term Debt Due Within One Year.....	4,360,000	2,410,000
TOTAL CURRENT LIABILITIES.....	63,702,059	48,949,165

### DEFERRED CREDITS:

Deferred Contributions in Aid of Construction.....	13,429,335	11,276,724
Metropolitan Sewer Capacity Service Charge.....	433,438	480,722
Deferred Developers Deposits.....	3,824,782	5,780,467
Deferred Credit Metropolitan Agencies.....	0	4,706,192
TOTAL DEFERRED CREDITS.....	17,687,555	22,244,105

TOTAL LIABILITIES.....	\$324,274,614	\$81,680,270
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### COMMITMENTS AND CONTINGENCIES (Notes 3 and 7)

### EQUITY:

Contributions in Aid of Construction:		
Federal.....	91,621,638	67,878,167
State.....	16,107,827	15,966,182
Municipal.....	41,055,496	40,553,280
Local.....	9,476,799	9,484,899
Developers.....	261,368,563	242,718,126
Capacity Charge.....	172,425,432	157,218,394
Other.....	18,861,862	18,861,862

Total Contributions in Aid of Construction.....	610,917,617	552,680,910
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### Retained Earnings:

Invested in Assets of the System.....	428,298,578	420,586,227
Designated for Future Years' Capital Projects and Operations.....	66,505,667	29,121,263

Total Retained Earnings.....	494,804,245	449,707,490
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TOTAL EQUITY.....	1,105,721,862	1,002,388,400
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TOTAL LIABILITIES AND EQUITY.....	\$1,429,996,476	\$1,084,068,670
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# Sewerage Utility

## STATEMENTS OF INCOME AND RETAINED EARNINGS FOR THE YEARS ENDED JUNE 30, 1994 AND 1993

EXHIBIT B

	Year Ended June 30	
	1994	1993
<b>OPERATING REVENUES:</b>		
Sewer Service Charges:		
Inside City:		
Domestic.....	\$89,630,046	\$83,158,791
Commercial and Industrial.....	35,072,134	35,014,552
Outside City:		
Domestic, Commercial and Industrial.....	7,866	6,138
Treatment Plant Service for Others .....	32,360,195	26,986,390
Total Sewer Service Charges.....	157,070,241	145,165,871
Other Operating Revenues:		
Aquaculture Operating Grants.....	227,550	(88,264)
Miscellaneous (Net).....	2,779,270	588,854
<b>TOTAL OPERATING REVENUES.....</b>	<b>160,077,061</b>	<b>145,666,461</b>
OPERATING EXPENSES (Note 4).....	109,938,980	92,317,053
<b>OPERATING INCOME.....</b>	<b>50,138,081</b>	<b>53,349,408</b>
<b>NONOPERATING REVENUES (EXPENSES):</b>		
Interest Income (Note 2).....	11,289,578	11,297,768
Gain (Loss) on Sale/Retirement of Fixed Assets.....	(6,316,466)	(1,244,597)
Gain on Early Redemption of Bonds.....	0	8,262
Interest Expense – Revenue Bonds and Installment Purchase Agreement (Note 3).....	(8,355,755)	(663,368)
Financing Costs Under Installment Purchase Agreement.....	(232,164)	0
Reverse Repurchase Agreement Interest Expense .....	(740,345)	(538,465)
Other.....	423,229	8,414,603
<b>TOTAL NONOPERATING REVENUES (EXPENSES).....</b>	<b>(3,931,923)</b>	<b>17,274,203</b>
Transfer Out.....	(1,109,403)	(500,000)
<b>NET INCOME.....</b>	<b>45,096,755</b>	<b>70,123,611</b>
Retained Earnings at Beginning of Year.....	449,707,490	379,583,879
<b>RETAINED EARNINGS AT END OF YEAR.....</b>	<b>\$494,804,245</b>	<b>\$449,707,490</b>

See Notes to Financial Statements.

# Sewerage Utility

## STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED JUNE 30, 1994 AND 1993

EXHIBIT C

	Year Ended June 30	
	1994	1993
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Operating Income (Loss).....	\$50,138,081	\$53,349,408
Adjustments to Reconcile Operating Income (Loss) to Net Cash Provided By (Used For) Operating Activities:		
Depreciation and Amortization.....	10,231,072	8,691,758
Changes in Assets and Liabilities:		
(Increase) Decrease in Accounts Receivable.....	814,242	3,477,096
(Increase) Decrease in Prepaid and Reimbursable Items and Deposits.....	105,798	(23,991)
Increase (Decrease) in Accounts Payable.....	(8,444,541)	1,662,443
Increase (Decrease) in Accrued Payroll.....	437,255	303,375
Increase (Decrease) in Accrued Annual Leave and Sick Leave.....	538,956	256,843
Increase (Decrease) in Accrued SPSP Contributions Payable.....	25,264	18,892
Increase (Decrease) in Due to Other Funds.....	(500,000)	(500,000)
Increase (Decrease) in Liability Claims.....	2,017,582	474,256
Increase (Decrease) in Deferred Revenue.....	(5,628,119)	11,398,364
Other Nonoperating Revenue.....	2,276,816	8,414,603
<b>NET CASH PROVIDED BY (USED FOR) OPERATING ACTIVITIES.....</b>	<b>52,012,406</b>	<b>87,523,047</b>
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES</b>		
Operating Transfers In (Out) to Other Funds.....	(500,000)	(500,000)
Transfers from (to) Governmental Funds.....	(609,403)	0
Proceeds from (Payments for) Advances and Deposits.....	(306,615)	(509,609)
<b>NET CASH PROVIDED BY (USED FOR) NONCAPITAL FINANCING ACTIVITIES.....</b>	<b>(1,416,018)</b>	<b>(1,009,609)</b>
<b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES</b>		
Proceeds from Installment Purchase Agreement.....	147,718,559	0
Proceeds from Contributed Capital.....	39,657,117	24,694,234
Acquisition of Fixed Assets.....	(134,505,309)	(133,392,817)
Principal Paid on Long-Term Debt.....	(15,652,000)	(2,283,738)
Interest Paid on Long-Term Debt.....	(6,899,017)	(676,117)
<b>NET CASH PROVIDED BY (USED FOR) CAPITAL AND RELATED FINANCING ACTIVITIES.....</b>	<b>30,319,350</b>	<b>(111,658,438)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Net (Purchases) Sales of Investments.....	18,174,610	(5,386,787)
Interest and Dividends Received on Investments.....	10,522,605	11,571,715
Reverse Repurchase Agreement Interest Paid.....	(740,345)	(538,465)
<b>NET CASH PROVIDED BY (USED FOR) INVESTING ACTIVITIES.....</b>	<b>27,956,870</b>	<b>5,646,463</b>
<b>NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS.....</b>	<b>108,872,608</b>	<b>(19,498,537)</b>
Cash and Cash Equivalents at Beginning of Year.....	219,150,650	238,649,187
<b>CASH AND CASH EQUIVALENTS AT END OF YEAR.....</b>	<b>\$328,023,258</b>	<b>\$219,150,650</b>

See Notes to Financial Statements.

# ***Sewerage Utility***

NOTES TO THE FINANCIAL STATEMENTS  
FOR THE YEAR ENDED JUNE 30, 1994

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## **1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The Sewerage Utility is included in the administrative organization of the City of San Diego (the "City"); its financial information and records are established and maintained by the City.

The accounting policies of the Sewerage Utility conform to Generally Accepted Accounting Principles ("GAAP") as applicable to governmental units. The following is a summary of the more significant of such policies:

### **A. Basis of Presentation**

The financial activities of the Sewerage Utility are accounted for and reported as an Enterprise Fund of the City. The measurement focus is upon determination of net income, financial position and changes in financial position.

Enterprise Funds are used to account for operations (a) that are financed and operated in a manner similar to private business enterprises-where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability or other purposes.

### **B. Basis of Accounting**

The Sewerage Utility uses the accrual basis of accounting. Under the accrual basis of accounting, revenues are recognized when earned, and expenses are recorded when incurred. Estimated unbilled revenues are recognized at the end of each fiscal year. This estimated amount is based on billings during the month following the close of the fiscal year.

### **C. Utility Plant**

Utility plant in service and land are stated at estimated cost based on amounts appraised on July 1, 1959, plus subsequent additions generally at cost or, in the case of contributions in aid of construction, at cost or appraised value at the date of contribution. The utility plant is depreciated by the straight-line method over estimated useful lives of five to seventy-five years.

### **D. Employee Annual Leave**

The Sewerage Utility provides combined annual leave to cover both vacation and sick leave. It is the Sewerage Utility's policy to permit employees eligible for the Management Benefits Plan to accumulate up to 17.5 weeks of earned but unused annual leave and all other employees to accumulate up to 15 weeks of earned but unused annual leave. Accumulation of these earnings will be paid to employees upon separation from service. Excess accumulated annual leave amounts not used by employees are forfeited on an annual basis.

# Sewerage Utility

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## E. Claims and Judgments

Costs of claims and judgments are recorded when the liability is incurred and measurable.

## F. Contributions in Aid of Construction

Additions to contributions in aid of construction (approximately \$58,237,000 in 1994 and \$46,513,000 in 1993) represents facilities or cash contributed for facility construction by property owners or government agencies. Cash contributions in aid of construction for meters and service are classified as deferred credits until the facilities have been installed.

## G. Statement of Cash Flows

All of the Sewerage Utility's "Cash with Custodian" and "Cash or Equity in Pooled Cash and Investments" are classified as cash and cash equivalents.

## **2. CASH AND INVESTMENTS**

### A. Cash with Custodian

Cash with Custodian represents funds held by a bank trustee on behalf of the Sewerage Utility for the payment of principal and interest to bondholders. Since such cash is held by the bank's trust department, it is not covered by federal depository insurance or collateralized by securities owned by the bank.

### B. Cash or Equity in Pooled Cash and Investments

Other cash resources of the Sewerage Utility are combined with the cash resources of the City to form a pool of cash that is managed by the City Treasurer.

As provided for by the Government Code, the cash balance of substantially all City funds and certain entities are pooled and invested by the City Treasurer for the purpose of increasing interest earnings through investment activities. The Sewerage Utility's net share of the total pooled cash and investments is included in the accompanying balance sheet under the captions "Cash or Equity in Pooled Cash and Investments" and "Obligations under Reverse Repurchase Agreements". Interest earned on pooled investments is deposited to certain of the participating City funds and entities, including the Sewerage Utility, based upon each fund's and each entity's average daily deposit balance during the allocation period with all remaining interest deposited to the City's General Fund.

## Sewerage Utility

The City may transact business only with banks, savings and loans, and investment securities dealers who are primary dealers regularly reporting to the New York Federal Reserve Bank. Exceptions to this rule can be made only upon written authorization of the City Treasurer. Authorized cash deposits and investments are governed by state law, as well as by the City's own written investment policy. Within the context of these limitations, permissible investments include (1) obligations of the U.S. government and federal agencies, (2) commercial paper rated A-1 by Standard & Poor's Corporation or P-1 by Moody's Commercial Paper Record, (3) bankers' acceptances, (4) negotiable and/or non-negotiable certificates of deposit and non-negotiable time deposits issued by a nationally or state chartered bank or a state or federal savings and loan association, (5) repurchase and reverse repurchase agreements, (6) the local agency investment fund established by the state treasurer and (7) financial futures contracts in any of the other authorized investments which are used to offset an existing financial position and not for outright speculation.

### C. Reverse Repurchase Agreements

Investment policies permit the City to enter into reverse repurchase agreements which is a sale of securities with a simultaneous agreement to repurchase them in the future at the same price plus a contract rate of interest. The market value of the securities underlying reverse repurchase agreements normally exceeds the cash received providing the dealers a margin against a decline in the market value of the securities. If the dealers default on their obligations to resell these securities to the City or provide securities of cash or equal value, the City could suffer an economic loss equal to the difference between the market value plus accrued interest of the underlying securities and the reverse repurchase agreement obligation, including accrued interest payable. There was no such credit exposure at year-end. Interest expense was incurred under reverse repurchase agreements in the amount of \$740,344 for the year ended June 30, 1994.

### 3. LONG-TERM DEBT

Long-term debt as of June 30, 1994 and 1993 is comprised of the following:

<u>Type of Obligation</u>	<u>Interest Rates</u>	<u>Maturity Date</u>	<u>Original Amount</u>	<u>Balance Outstanding</u>	
				<u>June 30, 1994</u>	<u>June 30, 1993</u>
Installment Purchase					
Agreement Payable, 1993	2.8-5.25	2023	\$247,145,000	\$247,145,000	0
Sewer Revenue Bonds Payable, 1961, issued June 1961	4.0	1998	42,500,000	0	6,117,000
Sewer Revenue Bonds Payable, 1966 Series A issued May 1968	4.8-5.0	1998	5,000,000	0	2,870,000
Sewer Revenue Bonds Payable 1966 Series B, issued September 1968	5.1	1998	10,000,000	0	3,810,000
Loan Payable to County of San Diego	0	N/A	<u>100,000</u>	<u>100,000</u>	<u>100,000</u>
Total Long-Term Debt			<u>\$304,745,000</u>	<u>\$247,245,000</u>	<u>\$12,897,000</u>

## Sewerage Utility

The following is a summary of changes in general long-term debt for the year ended June 30, 1994:

	<u>Balance</u> <u>July 1, 1994</u>	<u>Additions</u>	<u>Retirements</u>	<u>Balance</u> <u>June 30, 1994</u>
Installment Purchase Agreement Payable, 1993	\$ 0	\$247,145,000	\$ 0	\$247,145,000
Sewer Revenue Bonds Payable 1961, issued June 1961	6,117,000	0	6,117,000	0
Sewer Revenue Bonds Payable 1966 Series A, issued May 1968	2,870,000	0	2,870,000	0
Sewer Revenue Bonds Payable 1966 Series B, issued Sept. 1968	3,810,000	0	3,810,000	0
Loan Payable to County of San Diego	<u>100,000</u>	<u>0</u>	<u>0</u>	<u>100,000</u>
Total	<u>\$12,897,000</u>	<u>\$247,145,000</u>	<u>\$12,797,000</u>	<u>\$247,245,000</u>

Annual requirements to amortize long-term debt as of June 30, 1994, including interest payments to maturity are as follows:

<u>Year Ending</u> <u>June 30,</u>	<u>Installment Purchase</u> <u>Agreement</u>
1995	\$ 16,319,661
1996	16,317,961
1997	16,320,461
1998	16,317,362
1999	16,316,611
2000	16,321,611
2001	16,318,206
2002-2010	146,875,114
Thereafter	<u>212,140,214</u>
Total	473,247,201
Less - Amounts representing interest	<u>(226,102,201)</u>
Net Installment Purchase Agreement	<u>\$ 247,145,000</u>

The City has an installment purchase agreement with the Public Facilities Financing Authority "Authority" for the acquisition, construction, installation, and improvement of its wastewater system. The Authority obtained financing for the project through the issuance of bonds secured by installment payments made to the Authority by the City. The City has pledged revenues from its wastewater system to finance these installment payments in an amount equal to the principal and interest requirements of the associated bonds.



## 4. TRANSACTIONS WITH THE CITY OF SAN DIEGO

The Sewerage Utility has financed the acquisition by the City's Internal Service Funds of certain vehicles and supplies used by the Sewerage Utility. The Internal Service Funds charge the Sewerage Utility for the use of the vehicles and supplies. However, there is no specific provision for the repayment of these advances or interest on them. It is the City's general intent that the advances be repaid as the financial condition of the Internal Service Funds permit. Some repayments have been made in prior years. Included in operating expenses is approximately \$3,588,000 in 1994 and \$3,225,000 in 1993 charged by the City to the Sewerage Utility for indirect general government expenditures incurred by the City. Such charges are based on a pro-rata portion of indirect general government expenditures applicable to the Sewerage Utility.

A portion of the utility plant, known as the Metropolitan Sewer System, was financed through a Federal grant. The grant was made to the Sewerage Utility and participating cities and sanitation districts served by the System. Grant funds received by the Sewerage Utility through participating agencies pay the Sewerage Utility for contracted capacity rights and share in the maintenance and operating costs.

The Sewerage Utility provides sewer services to the City at commercial rates. Such revenues were approximately \$368,000 in 1994 and \$514,000 in 1993.

The Sewerage Utility paid approximately \$3,604,000 in 1994 and \$3,194,000 in 1993 for computer services provided by the San Diego Data Processing Corporation, a non-profit corporation, of which the City is the sole member.

## 5. PENSION PLANS

The Sewerage Utility participates in the City's defined benefit plan and two (2) defined contribution pension plans which cover substantially all of its employees. The following information relates to the City of San Diego as a whole and does not reflect the participation of the Sewerage Utility Fund exclusively.

### DEFINED BENEFIT PLAN

#### A. Plan Description

All of the City and San Diego Unified Port District (the "District") full-time employees participate in the City Employees' Retirement System ("CERS"), an agent multiple-employer public employee retirement system that acts as a common investment and administrative agent for the City and the District. For the year ended June 30, 1994 the City's payroll for employees covered by CERS was approximately \$360,200,000 while the City's total payroll was approximately \$372,037,000.

All full-time City employees are eligible to participate in CERS. Retirement benefits are determined primarily by the member's age at retirement, the length of membership service and the member's final compensation. Final compensation is the members' compensation earnable based on the highest one-year period. Benefits fully vest on reaching 10 years of service. CERS also provides death and disability benefits. Benefits are established by the City's Municipal Code.

City employees are required to contribute a percentage of their annual salary to CERS. The City is required to contribute the remaining amounts necessary to fund CERS, using the actuarial basis specified by statute.

**B. Funding Status and Progress**

The amount shown below as the "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases and step-rate benefits, estimated to be payable in the future as a result of employee service to date. The measure is intended to help users assess the funding status of CERS on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among employers. The measure is the actuarial present value of credited projected benefits, and is independent of the funding method used to determine contributions to CERS.

The pension benefit obligation was computed as part of an actuarial valuation performed as of June 30, 1993. Significant actuarial assumptions used in the valuation include (a) a rate of return on the investment of present and future assets of 8 percent a year compounded annually, (b) projected salary increases of 5½ percent a year compounded annually (.5 percent due to merit and 5.0 percent due to inflation), (c) up to a 2 percent per annum cost of living assumption, and (d) the Group Annuity Mortality Table with a 2 year setback for males and an 8 year setback for females.

## Sewerage Utility

Accumulated benefits and net assets for the City's defined benefit plan as of June 30, 1993, the most recent actuarial valuation, are as follows (in thousands):

**Pension benefit obligation:**

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 583,326
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**Current employees:**

Accumulated employee contributions including allocated investment earnings	142,773
Employer-financed vested	395,380
Employer-financed nonvested	<u>99,351</u>

Total pension benefit obligation	1,220,830
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Net assets available for benefits, at cost	<u>1,101,912</u>
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Unfunded pension benefit obligation	<u>\$ 118,918</u>
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The market value of the net assets was approximately \$1,214,453,786 at June 30, 1993.

The number of employees and covered membership are as follows:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	4,072
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Fully vested active employees	3,207
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Nonvested active employees	5,746
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**C. Actuarially Determined Contribution Requirements and Contribution Made**

Contributions to CERS from City employees vary according entry age and salary. The City contributes a portion of the employees' share and the remaining amount necessary to fund the system based on an actuarial valuation at the end of the preceding year under the entry age normal cost method. The entry age normal cost method defines the normal cost as the level percent of payroll needed to fund benefits over the period from the date of participation to the date of retirement. Beginning with the June 30, 1992 valuation, contributions will be based on the projected unit credit method of actuarial valuation. Initial prior service costs are being amortized over a period of 30 years. Additional prior service costs due to plan change in 1965 are being amortized over 30 years.

The significant actuarial assumptions used to compute the actuarially determined contribution requirement are the same as those used to compute the pension benefit obligation as described above.

The contribution to CERS for 1994 of \$51,728,000 (14.4 percent of current covered payroll) was made in accordance with actuarially determined requirements computed through an actuarial valuation performed as of June 30, 1992 (the June 30, 1993 valuation was not received by the City until January 1994). The City contributed \$37,233,000 (10.3 percent of covered payroll); employees contributed \$14,495,000 (4.0 percent of covered payroll). All of the employer contributions were applied to normal cost.

### **D. Trend Information**

Trend information gives an indication of the progress made in accumulating sufficient assets to pay benefits when due. Ten-year trend information may be found on page 19 of the City's Comprehensive Annual Financial Report. For the three fiscal years ended 1991, 1992 and 1993, respectively, available assets were sufficient to fund 94.6, 95.2 and 90.3 percent of the City's pension benefit obligation. Unfunded pension benefit obligation represented 16.9, 15.4 and 34.9 percent of the City's annual payroll for employees covered by CERS for 1991, 1992, and 1993, respectively. Showing unfunded pension benefit obligation as a percentage of annual covered City payroll approximately adjusted for the effects of inflation for analysis purposes. In addition for the three (3) fiscal years ended 1991, 1992 and 1993, the City's contributions to CERS, all made in accordance with actuarially determined requirements, were 12.7, 8.9 and 10.0 percent respectively of annual covered payroll.

Plan data for the plan year ended June 30, 1994 is not yet available.

### **DEFINED CONTRIBUTION PLANS**

- A. Pursuant to the City's withdrawal from the Federal Social Security System effective January 8, 1982, the City provides pension benefits for eligible full-time employees through a supplemental pension and savings plan, a defined contribution plan. In a defined contribution plan, benefits depend solely on amounts contributed to the plan plus investment earnings. Employees are eligible to participate from the date of employment. State legislation requires that both the employee and the City contribute an amount equal to 3% of the employees total salary each month. Participants in the plan hired before April 1, 1986 and on or after April 1, 1986 may voluntarily contribute up to an additional 4.5% and 3.05%, respectively, of total salary. The City also contributes an amount equal to the employee voluntary contributions. The City's contributions for each employee (and interest allocated to the employee's account) are fully vested after five years' continuous service. City contributions for, and interest forfeited by, employees who leave employment before five years of service are used to reduce the City's contribution requirements.

The City's total payroll in fiscal year 1994 was approximately \$372,037,000. The City's contributions were calculated using the salary amount of approximately \$222,397,000. The City and the covered employees each contributed approximately \$14,068,000 (6.3%) or approximately \$28,096,000 in total.

- B. In addition, the City provides pension benefits for all eligible full-time employees through the 401(k) Deferred Compensation Plan, also a defined contribution plan. Employees are eligible to participate twelve months after the date of employment. Employees make contributions to their 401(k) accounts through payroll deductions, and may also elect to have the City contribute to their 401(k) accounts through the City's Employees' Flexible Benefits Program.

The City's total payroll in fiscal year 1994 was approximately \$372,037,000. The City's contributions were pursuant to various contractual arrangements with employees. The City and the covered employees contributed approximately \$3,555,000 and approximately \$2,771,000 respectively, or approximately \$6,326,000 in total.

### **6. POSTRETIREMENT HEALTH INSURANCE**

In addition to providing pension benefits, the City of San Diego Municipal Code provides certain health care insurance benefits for retired general and safety members of CERS who retired on or after October 6, 1980. At June 30, 1994, approximately 1,709 retirees were eligible and received benefits. Currently, expenses for postemployment healthcare benefits are recognized as they are paid. For the fiscal year ended June 30, 1994, expenditures of approximately \$4,398,363 were recognized for such healthcare benefits.

### **7. COMMITMENTS AND CONTINGENCIES**

The Sewerage Utility's construction plans for various projects are estimated to cost approximately \$179,104,000. As of June 30, 1994, the Utility's contractual commitments for the projects totalled approximately \$152,404,000. The Utility intends to finance the contractual commitments with approved State and Federal grants, service charges and the Installment Purchase Agreement.

The Sewerage Utility is self-insured for general liability claims. At June 30, 1994, the Sewerage Utility has recorded approximately \$3,021,000 for such claims. These amounts represent the Utility's determination of the probable ultimate cost of the claims.

The Sewerage Utility has stipulated to upgrading its sewer treatment facilities in settlement of a portion of a suit filed by the United States against the City. The sewage treatment could range from chemical treatment of sewage to construction of new treatment facilities which could be in excess of \$2 billion borne by utility users fees through the year 2003.

## **Sewerage Utility**

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### **8. COMPREHENSIVE ANNUAL FINANCIAL REPORT DIFFERENCES**

Due to the unavailability of certain data required for billing purposes to the users of the Metro Water System, the following immaterial differences exist between amounts included in the City of San Diego Comprehensive Annual Financial Report and the City of San Diego Sewerage Utility Financial Statements.

Those amounts are as follows (in thousands):

	Per Sewerage Utility	Per CAFR	Difference
Accounts Receivable	24,437	21,582	2,855
Deferred Credits	17,688	20,043	(2,355)
Sewer Service Charges	157,070	151,860	5,210

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# Sewerage Utility

NET REVENUE AVAILABLE FOR DEBT SERVICE  
FOR THE YEARS ENDED JUNE 30, 1994 AND 1993

EXHIBIT D

UNAUDITED

	Year Ended June 30	
	1994	1993
<b>TOTAL OPERATING REVENUES (Exhibit B)</b> .....	<b>\$160,077,061</b>	<b>\$145,666,461</b>
<b>OPERATING EXPENSES:</b>		
Transmission.....	23,481,764	20,192,251
Treatment and Disposal Plant.....	45,125,696	38,145,441
Special Projects.....	6,663,570	5,682,992
Accounting.....	2,228,585	2,249,741
General and Administrative.....	22,208,293	17,354,870
<b>TOTAL OPERATING EXPENSES</b> .....	<b>99,707,908</b>	<b>83,625,295</b>
<b>OPERATING INCOME</b> .....	<b>60,369,153</b>	<b>62,041,166</b>
<b>OTHER INCOME (CHARGES):</b>		
Operating Transfer In/(Out).....	(1,109,403)	(500,000)
Trunk Line Sewer Area Charge.....	(361,382)	0
Capacity Charge Municipal System.....	15,136,994	10,920,494
Interest Income.....	11,289,578	11,212,178
Reverse Repurchase Agreement Interest Expense .....	(740,345)	(538,465)
Other Income.....	423,229	8,500,193
<b>TOTAL OTHER INCOME</b> .....	<b>24,638,671</b>	<b>29,594,400</b>
<b>NET REVENUE AVAILABLE FOR DEBT SERVICE (As Defined by Bond Ordinance)</b> .....	<b>\$85,007,824</b>	<b>\$91,635,566</b>

## DEBT SERVICE COVERAGE

(Earnings Times Debt Service)

The Principal and Interest Due in Fiscal Year Ending June 30, 1994  
(\$9,962,877) Covered.....

8.53

# Sewerage Utility

EXPENSES  
ALLOCATION FOR BILLING TO METROPOLITAN SYSTEM  
FOR THE YEAR ENDED JUNE 30, 1994

EXHIBIT E

UNAUDITED

## Operating Expenses

### TRANSMISSION:

	Municipal System	Metropolitan System	Clean Water System	Total
Cleaning and Stoppage Removals, Mains and Laterals.....	\$4,280,467	\$0	\$0	\$4,280,467
Accrued Claims.....	2,017,582	0	0	2,017,582
Maintenance and Laterals.....	618,866	0	0	618,866
Maintenance of Mains and Manholes.....	4,090,122	27,243	0	4,117,365
Sewage Pumping Stations.....	5,958,075	6,489,409	0	12,447,484
<b>TOTAL TRANSMISSION.....</b>	<b>16,965,112</b>	<b>6,516,652</b>	<b>0</b>	<b>23,481,764</b>

### TREATMENT AND DISPOSAL:

Cogeneration Facilities.....	0	1,432,340	0	1,432,340
Point Loma Plant.....	0	35,592,009	0	35,592,009
Escondido System.....	(767,490)	0	0	(767,490)
Sewage Testing and Control.....	3,392,095	5,476,742	0	8,868,837
<b>TOTAL TREATMENT AND DISPOSAL.....</b>	<b>2,624,605</b>	<b>42,501,091</b>	<b>0</b>	<b>45,125,696</b>

### SPECIAL PROJECTS:

Administration.....	0	0	77,106	77,106
General Expense.....	0	0	6,586,464	6,586,464
<b>TOTAL SPECIAL PROJECTS.....</b>	<b>0</b>	<b>0</b>	<b>6,663,570</b>	<b>6,663,570</b>

### ACCOUNTING SERVICES:

General Accounting.....	189,808	0	0	189,808
Utility Commercial.....	2,038,777	0	0	2,038,777
<b>TOTAL ACCOUNTING SERVICES.....</b>	<b>2,228,585</b>	<b>0</b>	<b>0</b>	<b>2,228,585</b>

### GENERAL, ADMINISTRATIVE AND TAXES:

Utilities Administration and General Expenses.....	11,226,235	4,240,726	0	15,466,961
Expenses of Other City Departments Applicable to Sewerage Utility.....	3,046,246	68,795	601,317	3,716,358
Engineering Expenses.....	1,648,019	164,293	1,212,662	3,024,974
<b>TOTAL GENERAL, ADMINISTRATIVE AND TAXES.....</b>	<b>15,920,500</b>	<b>4,473,814</b>	<b>1,813,979</b>	<b>22,208,293</b>

<b>TOTAL EXPENSES.....</b>	<b>37,738,802</b>	<b>53,491,557</b>	<b>8,477,549</b>	<b>99,707,908</b>
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UNALLOCATED COSTS.....	0	0	(1,227,458)	(1,227,458)
OVERHEAD ALLOCATION TO CONSTRUCTION.....	0	(334,818)	(1,467,218)	(1,802,036)
RECONSTRUCTION AND REPLACEMENT OF NET ALLOCATION.....	0	17,663,160	86,018,331	103,681,491
DEBT SERVICE ALLOCATION.....	0	0	2,373,526	2,373,526
METROPOLITAN SYSTEM INCOME CREDITS.....	0	(517,932)	(68,676,965)	(69,194,897)

<b>TOTAL ALLOCATION FOR BILLING PURPOSES.....</b>	<b>\$37,738,802</b>	<b>\$70,301,967</b>	<b>\$25,497,765</b>	<b>\$133,538,533</b>
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# Sewerage Utility

CHANGES IN FUNDS AVAILABLE FOR APPROPRIATION  
FOR THE YEAR ENDED JUNE 30, 1994

EXHIBIT F

UNAUDITED

SEWER REVENUE  
FUND

Funds Available for Appropriation at July 1, 1993.....	\$0
Add:	
Cash Receipts (Schedule F-1).....	355,336,462
Anticipated Contributions from Other Agencies at June 30, 1994.....	31,421,593
Accrued Annual Leave and Sick Leave at July 1, 1993.....	2,328,707
Continuing Appropriations at July 1, 1993.....	42,055,322
Continuing Appropriations Encumbered at July 1, 1993.....	106,395,822
Designated for Subsequent Years' Capital Projects and Operations at June 30, 1993.....	29,121,263
Prior Years' Encumbrances Cancelled.....	4,041,285
Total Balances and Additions.....	570,700,454
Deduct:	
Expenditures and Encumbrances (Schedule F-2).....	424,495,540
Anticipated Contributions from Other Agencies at July 1, 1993.....	33,435,814
Accrued Annual Leave and Sick Leave at June 30, 1994.....	2,867,664
Operating Reserve at June 30, 1994.....	12,012,228
Emergency Reserve at June 30, 1994.....	5,000,000
Designated for Subsequent Years' Capital Projects and Operations at June 30, 1994.....	66,505,667
Continuing Appropriations at June 30, 1994.....	26,383,541
FUNDS AVAILABLE FOR APPROPRIATION AT JUNE 30, 1994.....	\$0

The Sewer Revenue Fund (Municipal Code Sec. 64.31) is used to account for the receipts, expenditures, and revenue derived from operation of the sewer system of the Water Utilities Department. The Charter, Sec. 90.2 Sub. 8B, provides that "all revenues shall be paid into the Sewer Revenue Fund and shall be used for the following purposes: (1) paying the cost of maintenance and operation of the sewer system; (2) paying principal and interest (including payments into any reserve or sinking fund) and premiums, if any, upon redemption, of sewer revenue bonds issued under this section and payable from said Sewer Revenue Fund; (3) paying all or any part of the cost and expense of extending, reconstructing, or improving the sewer system or any part thereof or making additions to such system; (4) transferring from any surplus in the Sewer Revenue Fund to the Capital Outlay Fund, at one time or from time-to-time, all or any part of the sums expended from said Capital Outlay Fund after July 1, 1960, for any purpose for which revenue bonds may be issued under this section; (5) paying from any surplus in the Sewer Revenue Fund principal or interest, or both, or any part thereof, of general obligation bonds heretofore or hereafter issued for any purpose for which revenue bonds may be issued under this section."

# Sewerage Utility

CHANGES - PLANT IN SERVICE  
FOR THE YEAR ENDED JUNE 30, 1994

SCHEDULE A-1

UNAUDITED

	Balance at July 1, 1993	Additions	Retirements	Balance at June 30, 1994
<b>MUNICIPAL SEWERAGE SYSTEM:</b>				
Land and Land Rights:				
Sewer Mains.....	\$512,148	\$0	\$0	\$512,148
Pumping Systems.....	2,319,379	0	0	2,319,379
Treatment and Disposal.....	467	0	0	467
Sewer Service Laterals.....	54,254,080	1,610,069	927	55,863,222
Sewer Mains.....	288,951,926	21,884,443	261,347	310,575,022
Meters and Measuring Devices:				
Structures and Improvements.....	42,960	0	647	42,313
Equipment.....	121,313	0	0	121,313
Pumping System:				
Structures and Improvements.....	7,152,870	0	0	7,152,870
Equipment.....	1,497,159	0	0	1,497,159
Treatment and Disposal Plant:				
Capacity Rights:				
City of Escondido Sewerage System.....	4,474,873	0	0	4,474,873
Laboratory and Office Furniture and Equipment.....	757,407	1,481	74,737	684,151
General Plant:				
Structures and Improvements.....	230,169	0	1,092	229,077
Office Furniture and Equipment.....	1,029,314	213,635	43,711	1,199,238
Portable Equipment.....	760,245	314,301	77,194	997,352
<b>TOTAL MUNICIPAL SEWERAGE SYSTEM.....</b>	<b>362,104,310</b>	<b>24,023,929</b>	<b>459,655</b>	<b>385,668,584</b>
<b>METROPOLITAN SEWERAGE SYSTEM:</b>				
Land and Land Rights:				
Interceptor Mains.....	589,780	0	0	589,780
Pumping System.....	49,605	0	0	49,605
Treatment and Disposal Plants.....	860,322	0	0	860,322
Interceptor Mains.....	37,854,754	0	1,307	37,853,447
Pumping System:				
Structures and Improvements.....	6,450,034	0	0	6,450,034
Equipment.....	3,343,165	0	519	3,342,646
Treatment and Disposal Plant:				
Structures and Improvements.....	16,360,746	0	0	16,360,746
Equipment.....	6,391,015	0	0	6,391,015
Laboratory and Office Furniture and Equipment.....	3,456,491	1,725,808	1,452,893	3,729,406
General Transportation Equipment.....	66,905	0	8,602	58,303
General Plan Portable Equipment.....	2,051,366	830,578	142,437	2,739,507
Ocean Outfall Intake:				
Structures and Improvements.....	1,780,965	0	0	1,780,965
Equipment.....	323,840	0	0	323,840
Ocean Outfall Line.....	9,301,041	0	0	9,301,041
Sludge Disposal Line.....	391,232	0	0	391,232
Monitoring Vessels.....	293,772	91,191	0	384,963
<b>TOTAL METROPOLITAN SEWERAGE SYSTEM..</b>	<b>89,565,033</b>	<b>2,647,577</b>	<b>1,605,758</b>	<b>90,606,852</b>
<b>CLEAN WATER PROGRAM:</b>				
General Office Furniture and Equipment.....	437,629	10,095	182,822	264,902
<b>TOTAL CLEAN WATER PROGRAM.....</b>	<b>437,629</b>	<b>10,095</b>	<b>182,822</b>	<b>264,902</b>
<b>TOTAL SEWERAGE PLANT IN SERVICE..</b>	<b>\$452,106,972</b>	<b>\$26,681,601</b>	<b>\$2,248,235</b>	<b>\$476,540,338</b>

# ***Sewerage Utility***

**BONDED DEBT  
JUNE 30, 1994**

**SCHEDULE A-2**

**UNAUDITED**

Title of Issue	Year of Issue/ Maturity	Coupon Rate of Interest	Effective Rate of Interest	Amount Sold	Amount Retired			Amount Outstanding June 30, 1994
					Prior to July 1, 1993	During 1993-1994	Total	
REVENUE BONDS								
Sewer Revenue Bonds, 1961 Term Bonds.....	1961/1998	4.00%	4.03%	\$26,000,000	\$19,883,000	\$6,117,000	\$26,000,000	\$0
Sewer Revenue Bonds, 1966 A.....	1966/1998	5.00	4.97	3,730,000	860,000	2,870,000	3,730,000	0
Sewer Revenue Bonds, 1966 B.....	1966/1998	5.10	5.07	<u>7,590,000</u>	<u>3,780,000</u>	<u>3,810,000</u>	<u>7,590,000</u>	<u>0</u>
TOTAL REVENUE BONDS.....				<u>\$37,320,000</u>	<u>\$24,523,000</u>	<u>\$12,797,000</u>	<u>\$37,320,000</u>	<u>\$0</u>

B-21

# Sewerage Utility

INSTALLMENT PURCHASE AGREEMENT REQUIREMENTS FOR PRINCIPAL AND INTEREST  
JUNE 30, 1994

SCHEDULE A-3

UNAUDITED

## INSTALLMENT PURCHASE AGREEMENT

Fiscal Year	Annual Requirements		
	Principal	Interest	Total
1994-95	\$ 4,360,000	\$ 11,959,661	\$ 16,319,661
1995-96	4,500,000	11,817,961	16,317,961
1996-97	4,660,000	11,660,461	16,320,461
1997-98	4,820,000	11,497,362	16,317,362
1998-99	5,000,000	11,316,611	16,316,611
1999-2000	5,205,000	11,116,611	16,321,611
2000-01	5,415,000	10,903,206	16,318,206
2001-02	5,645,000	10,675,777	16,320,777
2002-03	5,885,000	10,433,041	16,318,041
2003-04	6,145,000	10,174,101	16,319,101
2004-05	6,420,000	9,897,576	16,317,576
2005-06	6,720,000	9,600,651	16,320,651
2006-07	7,040,000	9,281,452	16,321,452
2007-08	7,375,000	8,943,531	16,318,531
2008-09	7,735,000	8,584,000	16,319,000
2009-10	8,115,000	8,204,985	16,319,985
2010-11	8,510,000	7,807,350	16,317,350
2011-12	8,935,000	7,381,850	16,316,850
2012-13	9,385,000	6,935,100	16,320,100
2013-14	9,855,000	6,465,850	16,320,850
2014-15	10,370,000	5,948,463	16,318,463
2015-16	10,915,000	5,404,038	16,319,038
2016-17	11,490,000	4,831,000	16,321,000
2017-18	12,090,000	4,227,775	16,317,775
2018-19	12,725,000	3,593,050	16,318,050
2019-20	13,395,000	2,924,988	16,319,988
2020-21	14,095,000	2,221,750	16,316,750
2021-22	14,800,000	1,517,000	16,317,000
2022-23	15,540,000	777,000	16,317,000
TOTAL INSTALLMENT PURCHASE AGREEMENT	\$ 247,145,000	\$ 226,102,201	\$ 473,247,201

# Sewerage Utility

OPERATING EXPENSES  
FOR THE YEARS ENDED JUNE 30, 1994 AND 1993

SCHEDULE B-1

UNAUDITED

Year Ended June 30

1994

1993

## TRANSMISSION:

### Sewer Line Expenses:

Cleaning and Stoppage Removals, Mains and Laterals.....	\$4,280,467	\$2,964,404
Accrued Claims.....	2,017,582	1,003,891
Maintenance and Laterals.....	618,866	415,690
Maintenance of Mains and Manholes.....	4,117,365	4,042,015
Sewerage Pumping Stations.....	12,447,484	11,766,251
<b>TOTAL TRANSMISSION.....</b>	<b>23,481,764</b>	<b>20,192,251</b>

## TREATMENT AND DISPOSAL:

Cogeneration Facilities.....	1,432,340	1,435,743
Point Loma Plant.....	35,592,009	22,603,713
Escondido System.....	(767,490)	5,652,348
Sewage Testing and Control.....	8,868,837	8,453,637
<b>TOTAL TREATMENT AND DISPOSAL.....</b>	<b>45,125,696</b>	<b>38,145,441</b>

## SPECIAL PROJECTS:

Administration.....	77,106	976,843
General Expense.....	6,586,464	4,706,149
<b>TOTAL SPECIAL PROJECTS.....</b>	<b>6,663,570</b>	<b>5,682,992</b>

## ACCOUNTING SERVICES:

General Accounting.....	189,808	334,097
Utility Commercial.....	2,038,777	1,915,644
<b>TOTAL ACCOUNTING SERVICES.....</b>	<b>2,228,585</b>	<b>2,249,741</b>

## GENERAL AND ADMINISTRATIVE:

Utilities Administration and General Expense.....	15,231,015	11,616,135
Expense of Other City Departments Applicable to the Sewerage Utility.....	3,716,358	3,358,660
Engineering Expenses.....	3,024,974	2,829,979
Uncollectible Accounts.....	235,946	(449,904)
<b>TOTAL GENERAL AND ADMINISTRATIVE.....</b>	<b>22,208,293</b>	<b>17,354,870</b>

DEPRECIATION.....	10,231,072	8,691,758
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<b>TOTAL OPERATING EXPENSES (Exhibit B).....</b>	<b>\$109,938,980</b>	<b>\$92,317,053</b>
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# Sewerage Utility

## ESTIMATED AND ACTUAL CASH RECEIPTS FOR THE YEAR ENDED JUNE 30, 1994

## SCHEDULE F-1

UNAUDITED

	Estimate	Actual	Actual Over or (Under) Estimate
Sewer Service Charges.....	\$125,910,000	\$124,146,912	(\$1,763,088)
New Sewer Service Connections.....	132,000	82,581	(49,419)
Sewage Treatment Plant Services.....	35,114,421	26,252,662	(8,861,759)
Sludge Handling Charge.....	60,000	142,828	82,828
Interest Earnings.....	16,084,000	10,633,446	(5,450,554)
Services Rendered Other Funds.....	571,000	729,820	158,820
Services Rendered Others.....	741,000	743,530	2,530
Capacity Charge Municipal System.....	18,757,000	15,136,994	(3,620,006)
Sale of Electricity/Gas Engine Generation.....	350,000	342,194	(7,806)
Contributions in Aid.....	26,727,040	27,471,109	744,069
Reimbursement Agreements.....	0	147,715,570	147,715,570
Other Revenue.....	238,141,901	1,938,816	(236,203,085)
<b>TOTAL RECEIPTS (Exhibit F).....</b>	<b>\$462,588,362</b>	<b>\$355,336,462</b>	<b>(\$107,251,900)</b>

## APPROPRIATIONS, EXPENDITURES AND ENCUMBRANCES FOR THE YEAR ENDED JUNE 30, 1994

## SCHEDULE F-2

UNAUDITED

	Appropriation	Expenditures	Encumbrances	Total	Unencumbered Balance
Maintenance and Operation:					
Salaries and Wages.....	\$23,922,773	\$22,948,771	\$0	\$22,948,771	\$974,002
Supplies and Expenses.....	117,773,146	69,395,054	14,645,107	84,040,161	33,732,985
<b>Total Maintenance and Operation.....</b>	<b>141,695,919</b>	<b>92,343,825</b>	<b>14,645,107</b>	<b>106,988,932</b>	<b>34,706,987</b>
Outlay:					
Salaries and Wages.....	\$4,511,612	\$3,683,949	\$0	3,683,949	827,663
Construction.....	313,963,618	135,687,437	151,447,803	287,135,240	26,828,378
Equipment.....	4,201,815	4,043,147	176,958	4,220,105	(18,290)
<b>Total Outlay.....</b>	<b>322,677,045</b>	<b>143,414,533</b>	<b>151,624,761</b>	<b>295,039,294</b>	<b>27,637,751</b>
Installment Purchase Agreement Interest and Principal..	0	9,963,527	0	9,963,527	(9,963,527)
Revenue Bond Interest and Redemption.....	12,791,000	12,503,787	0	12,503,787	287,213
<b>TOTAL (Exhibit F).....</b>	<b>\$477,163,964</b>	<b>\$258,225,672</b>	<b>\$166,269,868</b>	<b>\$424,495,540</b>	<b>\$52,668,424</b>

# Sewerage Utility

## COMPARATIVE STATISTICS – LAST 25 YEARS

UNAUDITED

Fiscal Year	Revenue	Maintenance & Operations Expenses	Depreciation/ Amortization	Bonded Debt Interest	Installment Purchase Agreement Interest	Net Income (Net Loss)	Sewerage Utility Plant
1993–1994	166,579,352	99,707,908	10,231,072	344,258	8,011,497	39,886,239	1,086,714,363
1992–1993	165,387,094	85,908,357	8,691,758	663,368	0	70,123,611	940,408,602
1991 – 1992	156,398,388	84,063,686	8,537,235	759,467	0	63,038,000	789,009,185
1990 – 1991	176,050,678	97,080,094	7,728,094	845,673	0	70,396,817	660,790,628
1989 – 1990	135,010,158	49,310,391	7,595,851	946,601	0	77,157,315	584,655,754
1988 – 1989	105,569,993	52,554,119	7,202,283	1,188,054	0	44,625,537	533,924,815
1987 – 1988	79,905,782	43,078,783	6,552,549	1,093,428	0	29,181,022	495,983,544
1986 – 1987	66,507,806	40,399,201	4,793,238	1,172,475	0	20,142,892	426,717,530
1985 – 1986	61,537,979	40,875,962	4,606,729	1,243,379	0	14,811,909	387,899,143
1984 – 1985	52,213,372	33,411,136	4,358,260	1,317,408	0	13,126,568	361,977,583
1983 – 1984	46,954,543	29,025,029	4,270,337	1,420,917	0	12,238,260	341,933,354
1982 – 1983	36,361,779	27,903,104	4,334,128	1,477,618	0	2,646,929	325,624,027
1981 – 1982	33,920,624	21,445,160	4,154,343	1,576,205	0	6,744,916	305,365,349
1980 – 1981	30,272,181	19,028,259	3,709,590	1,657,258	0	5,877,074	272,093,788
1979 – 1980	25,155,663	14,380,431	3,490,499	1,752,554	0	5,532,179	253,619,444
1978 – 1979	17,561,366	9,995,880	3,286,831	1,846,145	0	2,432,510	237,556,808
1977 – 1978	14,481,158	8,548,148	3,105,951	1,886,886	0	940,173	227,473,005
1976 – 1977	12,812,758	7,435,366	2,818,588	1,943,352	0	615,452	218,329,880
1975 – 1976	13,246,496	7,150,653	2,796,775	2,082,142	0	1,216,926	205,243,617
1974 – 1975	11,430,127	6,151,868	2,532,588	2,134,392	0	611,279	192,958,952
1973 – 1974	10,689,864	4,770,672	2,405,586	2,183,642	0	1,329,964	182,987,436
1972 – 1973	9,884,454	4,427,592	2,196,512	2,228,956	0	1,031,394	171,547,467
1971 – 1972	9,354,922	4,071,662	2,293,680	2,271,022	0	718,558	149,424,423
1970 – 1971	9,487,476	3,762,088	2,346,443	2,327,213	0	1,051,732	139,387,048
1969 – 1970	8,815,880	3,341,332	2,070,009	2,379,443	0	1,025,096	130,178,151
1968 – 1969	8,220,036	3,237,075	1,974,679	2,252,909	0	755,373	125,072,248

Bonded Debt	Installment Purchase Agreement	Retained Earnings	Total System Flow in Million Gallons			Fiscal Year
			Point Loma Plant—Metro	Municipal Plant	Total Flow	
\$0	\$247,145,000	\$489,593,729	64,153.910	1,310.714	65,464.624	1993 – 1994
12,797,000	0	449,707,490	68,771.580	1,318.696	70,090.276	1992 – 1993
15,089,000	0	449,707,490	64,144.650	1,177.417	65,322.067	1991 – 1992
17,296,000	0	316,545,879	64,819.740	1,365.091	66,184.831	1990 – 1991
19,439,000	0	246,149,062	69,463.382	1,405.081	70,868.463	1989 – 1990
21,461,000	0	168,991,747	66,951.182	1,425.883	68,377.065	1988 – 1989
23,411,000	0	125,792,132	66,545.240	1,316.763	67,862.003	1987 – 1988
25,298,000	0	96,575,236	63,690.392	1,270.092	64,960.484	1986 – 1987
27,133,000	0	76,432,344	54,434.425	1,209.691	55,644.116	1985 – 1986
29,063,000	0	61,620,435	51,818.921	1,217.721	53,036.642	1984 – 1985
31,247,000	0	48,493,867	50,247.377	1,210.064	51,457.441	1983 – 1984
33,492,000	0	36,255,607	49,287.413	1,190.283	50,477.696	1983 – 1984
35,658,000	0	35,170,704	48,486.180	932.985	49,419.165	1982 – 1983
37,683,000	0	28,425,788	47,271.910	992.238	48,264.148	1981 – 1982
39,357,000	0	22,548,714	47,722.390	1,073.023	48,795.413	1980 – 1981
41,135,000	0	17,016,535	45,918.285	943.983	46,862.268	1979 – 1980
42,672,000	0	14,584,025	43,414.000	938.139	44,352.139	1978 – 1979
44,517,000	0	13,643,852	43,043.860	731.222	43,775.082	1977 – 1978
47,350,000	0	13,028,400	40,373.910	674.953	41,048.863	1976 – 1977
48,750,000	0	11,811,474	39,393.540	644.093	40,037.633	1975 – 1976
50,100,000	0	11,200,195	36,176.540	562.366	36,738.906	1974 – 1975
51,400,000	0	9,870,231	36,149.400	470.321	36,619.721	1973 – 1974
52,600,000	0	8,838,837	33,729.820	897.640	34,627.460	1972 – 1973
53,700,000	0	8,120,279	31,966.330	845.552	32,811.882	1970 – 1971
54,700,000	0	7,068,547	29,608.170	708.878	30,317.048	1969 – 1970
55,600,000	0	6,043,451	30,425.900	613.681	31,039.581	1968 – 1969



# Sewerage Utility

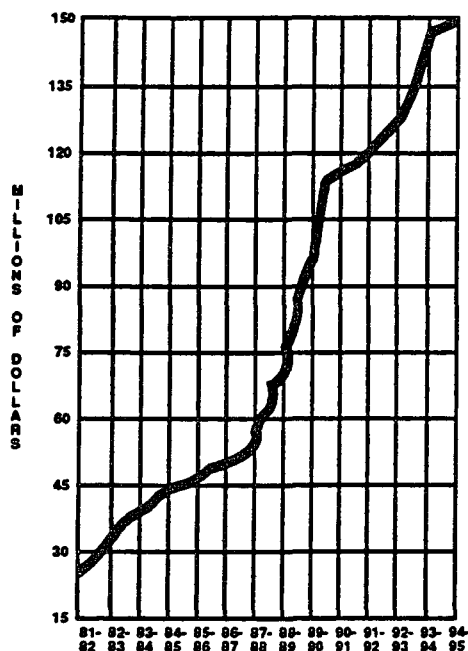
GENERAL STATISTICS  
FOR THE YEAR ENDED JUNE 30, 1994

TABLE II

UNAUDITED

Population (Estimated June 30, 1994).....	1,194,950
Sewage Flow RB / San Pasqual Municipal System (Million Gallons).....	1,310.714
Sewage Flow Metropolitan System (Million Gallons).....	64,153.910
Total Sewage Flow Municipal and Metropolitan System (Million Gallons).....	65,464.624
Other Agencies' Sewage Flow (Million Gallons).....	19,767.638
Total City Sewage Flow (Million Gallons).....	45,696.986
Average Daily Municipal and Metropolitan Systems Sewage Flow (Million Gallons).....	179.355
Average Daily City Sewage Flow (Million Gallons).....	125.197
Average Daily City Sewage Flow per Capita (Gallons).....	104.772
Maximum Daily Sewage Flow – Metropolitan System March 7, 1994 (Million Gallons).....	225.610
Minimum Daily Sewage Flow – Metropolitan System December 25, 1993 (Million Gallons).....	148.23
Sewer Service Laterals – June 30, 1994.....	252,990
Municipal Sewer System Mains in Service – June 30, 1994 (Miles).....	2,462.9
Metropolitan Interceptor Sewer Mains in Service – June 30, 1994 (Miles).....	25.40
Sludge Disposal Lines in Service – June 30, 1994 (Miles).....	6.50
Ocean Outfall Line in Service – June 30, 1994 (Miles).....	5.00
Total Sewer Mains and Lines in Service – June 30, 1994 (Miles).....	2,499.8

### REVENUES - SEWER SERVICE CHARGES



CLASS	YEAR ENDING JUNE 30		GROWTH	
	1994	1993	AMOUNT	PERCENT
<b>REVENUES - (Thousand Dollars)</b>				
Single Family Domestic	\$53,213	\$48,639	4,574	8.60%
Other Domestic	36,416	34,520	1,896	5.21%
Commercial	28,299	29,749	(1,450)	(15.94%)
Industrial	6,773	5,266	1,507	22.25%
Outside City	8	6	2	25.00%
Treat, Plant. Serv. for Others	27,150	26,986	164	6.10%
<b>TOTAL</b>	<b>\$151,859</b>	<b>\$145,166</b>	<b>6,693</b>	<b>4.41%</b>

### PRINCIPAL RATES (As of June 30, 1994)

- For single family dwelling unit serviced by a separate water meter ..... \$12.72 base fee plus \$2.15 per HCF per month.
- The monthly sewer service charge for all premises other than single family dwellings serviced by separate water meters shall be thirty-four cents (\$0.34) per month, plus a charge per 100 cubic feet of water delivered, computed in accordance with the following table:

User Class	Average Suspended Solids Concentration (Parts per Million)	Rate Per HCF at 70-75% Return to Sewer*
A	0- 100	1.235
B	101- 200	1.385
C	201- 300	1.523
D	301- 400	1.661
E	401- 500	1.810
F	501- 600	1.949
G	601- 700	2.091
H	701- 800	2.230
I	801 - 900	2.378
J	901-1,000	2.514
K	1,001 +	**

\*Charge for customers whose return to sewer deviates from 70-75% to be determined based on the following formula: Rate per HCF = Rate at 70-75% return/class midpoint (72.5% return) X midpoint of appropriate return class.

\*\*Class K/V shall include all dischargers of wastewater whose discharge exceeds 1,000 parts per million of suspended solids. The rate per HCF will be individually computed for dischargers in Class K/V on the basis of \$1.522 per HCF of flow, and \$0.197 per 100 parts per million of suspended solids, at 100% return.

- The City Manager has the power to establish reasonable sewer charges, other than those listed above:
  - where sewage is substantially different in volume and type than the average.
  - where water is received from another source than the city's source.
  - where use is such that water supplied is not substantially or entirely discharged into the sewer system.
  - for fire service connection.
  - where not connected to the City's sewer system.
  - where irrigation water is separately measured.

## **APPENDIX C**

### **CERTAIN INFORMATION REGARDING THE CITY OF SAN DIEGO AND AREA**

## APPENDIX C

*The following material is provided for general background purposes only, and is deemed to be not material to making an informed investment decision, and will not be updated to reflect future changes.*

### THE CITY OF SAN DIEGO

#### INTRODUCTION

With a total population in excess of 1.2 million and an area of 403 square miles, the City of San Diego (the "City") is the sixth largest city in the nation and the second largest city in California. A major factor contributing to the City's historically steady growth is quality of life. In addition to having one of the world's most favorable climates, the City offers a wide range of cultural and recreational services to both residents and visitors. With mild temperatures year round, the City's numerous beaches, parks, tennis courts, and golf courses are in constant use. Another factor in the City's growth has been its steadily expanding economy. The City's economic base, which in the past was heavily reliant on federal defense spending, has undergone a transformation in recent years. The new economic foundation is based on four major areas: international trade; high tech manufacturing; professional services; and a tourist industry with a strong convention trade component.

The City's emergence as a center for international trade has been made possible in part by the Port of San Diego, which offers world class maritime facilities built around one of the world's great natural harbors. While being a natural link to Latin America and the Pacific Rim due to its location and rich maritime cargo resources, the Port offers handling services at rates below those of other major west coast ports such as Los Angeles and San Francisco and has established itself as a niche port, attracting general cargo, including automobiles, chemicals, and fruit. In 1994, port and waterfront activities accounted for 26.7% of the City's gross regional product.

The City and the San Diego Unified Port District were awarded a metropolitan and regional World Trade Center status in 1993. The World Trade Center status will provide the City's businesses with direct, individually tailored linkages to all top markets in Mexico, Latin America, and the Pacific Rim. The Center is located in the downtown area and in addition to the federal conversion dollars San Diego stands to receive, the Center is expected to deliver immediate benefits to the City in the form of increased demand for downtown office space and increased business activity for retailers located near the World Trade Center building.

In fall 1993, the City applied for and was awarded a \$5.7 million U.S. Economic Development Administration Grant. In addition, the City and local partners will contribute \$4.4 million in cash and in-kind donations to foster economic development and international trade activities. This resource, totaling over \$10 million, will be used to operate the World Trade Center and to further San Diego's Economic Adjustment Program Strategy, a regional plan adopted in June 1992 to provide the City with the foundation to build a strong, diversified economic climate.

International trade activity is also facilitated by the City's immediate proximity to Mexico, a major U.S. trading partner, whose economy depends in part on U.S. manufactured products to support development of its new industrial base. Reflective of the San Diego-Mexico connection is the rapid growth of the City's industrial complex located on the Otay Mesa area adjacent to the border. Many of these facilities are twin plants, or "maquiladoras" with operations both in the U.S. and Mexico. Since 1986, 300 companies have moved into the area, generating 3,800 jobs. U.S. Department of Commerce export data indicates the strength of this trade relationship; from 1987 to 1993, the City metro area's exports to Mexico expanded from \$551 million to \$1.8 billion. It is anticipated that the North American Free Trade Agreement (NAFTA) will result in increased trade for the City with both Mexico and Canada. Although data on the local effects of NAFTA are not available, nationwide data

for 1994 show that U.S. exports to Mexico are up by 22% and statewide data through September 1994 show California exports up by 15.4%. With Mexico accounting for \$1.8 billion of the City's manufactured exports in 1993, it is almost certain that the City benefited from the first year under the new trade guidelines. The positive effects of NAFTA could be temporarily impacted by the recent peso devaluation.

A major component in the City's growing prominence as a center for "high tech" industry has been the rapid growth of telecommunications and software companies. The City is considered one of three wireless communication capitals in the nation. Along with Dallas and Chicago, the City is home to leaders in an industry that covers cellular technology, satellite communication and personal communication services (PCS). A small, but growing software industry with a strong international sales component is shaping the City into a software hub. In 1994, the City's telecommunications and software industry employed more than 22,000 people.

Another major component of the region's "high tech" industry is the health care technology cluster, which includes biotechnology companies involved in research and product development, biomedical firms engaged in the production and marketing of various types of medical devices and instruments, and pharmaceutical companies involved in developing chemical products for use in treatment of diseases and various medical conditions. According to a recent study prepared by Collaborative Economics, a private consulting firm, for the California Economic Strategy Panel, this cluster had total employment in 1993 of 27,000. According to a study released by the Ernst & Young accounting firm, the City has overtaken Los Angeles and Washington, D.C. to become the fourth largest concentration of biotech firms in the U.S., accounting for 8% of such firms in the nation.

The professional services sector, including firms in the business services, health, engineering and management services areas, is expected to add 51,000 jobs to the City's economy during the period 1990 to 1997, according to projections prepared by the California Employment Development Department. The service sector has proven extremely resilient, continuing to add jobs in 1992, 1993, and 1994, despite downturns in total nonagricultural employment during the same period.

The City's long established tourism industry entered a new phase in 1989 with the opening of the San Diego Convention Center. Since the opening of the Center, 229 major conventions were held with total attendance at more than 1.2 million, bringing in more than \$827 million.

## **ECONOMIC INFORMATION**

### **Introduction**

The economic and demographic information provided below has been collected from sources which the City believes to be reliable.

### **Population**

Since 1980, the City's population has increased by 322,162 (or by approximately 21,500 new residents annually). While the rate of growth has slowed in recent years, the City's population still grew by 12,900 people in 1994.

**POPULATION GROWTH  
1980 - 1995**

<u>Calendar Year</u>	<u>City of San Diego<sup>(1)</sup></u>	<u>Annual Growth Rate</u>	<u>County of San Diego<sup>(2)</sup></u>	<u>Annual Growth Rate</u>	<u>State of California</u>	<u>Annual Growth Rate</u>
1980	875,538	--	1,861,846	--	23,780,000	--
1985	970,062	2.1%	2,102,500	2.5%	26,358,000	2.1%
1986	995,889	2.7	2,169,900	3.2	26,999,000	2.4
1987	1,019,444	2.4	2,248,500	3.6	27,655,000	2.4
1988	1,044,137	2.4	2,328,300	3.6	28,323,000	2.4
1989	1,073,186	2.8	2,418,200	3.9	29,063,000	2.6
1990	1,110,549	3.5	2,498,016	3.3	29,760,021	2.4
1991	1,128,500	1.6	2,546,800	2.0	30,351,000	2.0
1992	1,150,600	2.0	2,604,500	2.3	30,982,000	2.1
1993	1,171,600	1.8	2,648,600	1.7	31,552,000	1.8
1994	1,184,800	1.1	2,687,800	1.5	31,952,000	1.3
1995	1,197,700	1.1	2,720,900	1.2	32,344,000	1.2

<sup>(1)</sup> City Planning Department's January 1 estimates which are based on the U.S. Census counts or official State Department of Finance estimates.

<sup>(2)</sup> U.S. Census 1980-1990; State Department of Finance estimates for 1991, 1992, 1993, 1994, and 1995.

The following chart sets out school enrollment in the San Diego Unified School District.

**SAN DIEGO UNIFIED SCHOOL DISTRICT  
ENROLLMENT AND ATTENDANCE**

<u>School Year</u>	<u>Enrollment</u>	<u>Average Daily Attendance</u>
1989-90	118,889	116,192
1990-91	121,152	118,175
1991-92	123,615	120,448
1992-93	125,125	121,800
1993-94	127,161	123,509
1994-95	129,539	124,992

Source: San Diego Unified School District

## The Region's Economic Base

As shown in the following table, the San Diego region has a diversified economic base. The 400,000+ jobs in San Diego Metropolitan area's economic base are distributed throughout the seven major categories shown below.

### SAN DIEGO METROPOLITAN AREA MAJOR SECTORS IN ECONOMIC BASE 1994

	Jobs (Thousands)	Percent of Economic Base
<b>High Tech Manufacturing</b>	<b>34.0</b>	<b>8.11%</b>
Computers	4.7	
Electronic Components	11.0	
Instruments	12.0	
Communications		
<b>Diversified Manufacturing</b>	<b>55.9</b>	<b>13.35%</b>
Apparel	5.4	
Printing & Publishing	13.2	
Other Industrial Machinery	8.7	
Other Diversified Manufacturing	28.6	
<b>Aircraft/Space/Defense</b>	<b>42.3</b>	<b>10.09%</b>
Aircraft/Space	11.3	
Shipbuilding	6.2	
Search & Navig. Equipment	2.5	
Federal Civilian Defense	22.3	
<b>Resource Based</b>	<b>2.7</b>	<b>0.64%</b>
Mining	0.4	
Stone, Clay & glass	2.3	
<b>Transportation - Wholesale Trade</b>	<b>58.8</b>	<b>14.03%</b>
Transportation	17.5	
Wholesale Trade	41.3	
<b>Professional Services</b>	<b>183.4</b>	<b>43.76%</b>
Business Services	58.7	
Health Services	64.7	
Engineering & Mgt.	41.1	
State Education	18.9	
<b>Tourism &amp; Entertainment</b>	<b>42.0</b>	<b>10.02%</b>
Hotels	23.6	
Amusement	18.4	
<b>TOTAL ECONOMIC BASE</b>	<b>419.1</b>	<b>100.0%</b>
<b>TOTAL NONFARMING JOBS</b>	<b>949.9</b>	

Source: State of California Employment Development Department

## Employment Summary

### ESTIMATED AVERAGE ANNUAL EMPLOYMENT AND UNEMPLOYMENT OF RESIDENT LABOR FORCE

<b>Civilian Labor Force City of San Diego</b> <b>(in Thousands)</b>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>
Employed	514.0	505.0	507.0	510.8	524.8
Unemployed	24.0	34.0	41.0	43.9	41.3
<b>Unemployment Rates<sup>(1)</sup></b>					
City	4.5%	6.3%	7.5%	7.9%	7.3%
County	4.4	6.1	7.4	7.8	7.2
California	5.6	7.5	9.1	9.2	8.6
United States	5.5	6.7	7.4	6.8	6.1

<sup>(1)</sup> The unemployment rate is computed from unrounded data, and it may differ from rates using the rounded figures in this table.

Source: California Employment Development Department, Labor Market Information Division for the State and County; U.S. Bureau of Labor -- Department of Labor Statistics for the United States.

As seen in the preceding table, the City's unemployment rate for calendar year 1994 was 7.3% down from 7.9% in calendar 1993. The City's rate was lower than the State's at 8.6%, but above the U.S. rate of 6.1%. The Chamber of Commerce has forecast the City's unemployment rate at 6.9% for 1995.

### SAN DIEGO METROPOLITAN AREA WAGE AND SALARY EMPLOYMENT<sup>(1)</sup> (in thousands)

	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>
Mining	0.7	0.7	0.6	0.5	0.4	0.4
Construction	55.2	51.6	47.0	43.1	39.5	40.0
Manufacturing	131.9	134.1	131.0	124.1	117.5	112.3
Nondurable Goods	26.3	28.0	28.5	30.8	32.3	32.5
Durable Goods	105.7	106.0	102.5	93.3	85.2	79.8
Transportation, Public Utilities	35.3	36.0	35.9	34.8	35.7	35.8
Trade	231.9	236.7	231.7	221.4	225.5	225.4
Wholesale	42.5	44.1	42.4	42.3	39.7	41.3
Retail	189.4	192.6	189.3	179.1	185.8	184.1
Finance, Insurance, Real Estate	63.0	63.9	62.8	61.1	62.2	60.9
Services	250.8	266.3	274.6	283.6	287.3	294.5
Government	169.3	177.4	178.9	179.3	179.1	180.6
Federal	47.4	49.2	47.1	45.4	44.3	44.9
State and Local	121.9	128.2	131.8	133.9	134.7	135.6
Total Nonagricultural	938.0	966.6	962.6	947.8	947.2	949.9

<sup>(1)</sup> Figures may not add to total due to independent rounding.

Source: State of California Employment Development Department, U.S. Department of Labor, Bureau of Labor Statistics.

As shown in the preceding table, during the period 1989 to 1994, total nonagricultural wage and salary employment in San Diego County recorded a net increase of 11,900 new jobs, resulting in an annual rate of growth for the period of 0.3%. The modest net growth figure of 11,900 understates the total job creation which occurred during the period. A total of 61,800 new jobs were created during the period; however, because of continued downsizing in several industries, including aerospace, this growth was partially offset, resulting in the final net growth figure of 11,900.



Creating jobs during the period were services (+43,700), government (+11,300) and nondurable manufacturing (+6,200). The growth in services was led by gains in various professional services categories, including research and development and the computer services and software sector.

Industries reducing their workforces included durable goods manufacturing (-25,900), construction (-15,200), retail and wholesale trade (-6,500), and the finance, insurance and real estate category (-2,100). The drop in durable goods manufacturing was due almost entirely to losses in aerospace and related defense based industries. The recession and industry restructuring accounted for the dip in trade employment. The drop in construction jobs coincided with the sharp fall off in building activity from the record pace of the late 1980's.

Wage and salary employment increased in calendar year 1994, after three consecutive years of decline, with a net increase of 2,700 jobs. Growth leaders during the year were services (+7,200), government (+1,500), wholesale trade (+1,400). Nondurable goods manufacturing and the transportation, communications and utilities sectors also registered slight increases. Reporting lower employment were durable goods manufacturing (-5,400) and retail trade (-1,700). Aerospace downsizing accounted for most of the manufacturing losses.

### ***Manufacturing***

Despite recent downturns, due in large part to cutbacks in defense spending, manufacturing remains one of the City's largest economic sectors. In 1993, total manufacturing output was estimated at \$15.2 billion, accounting for approximately 24% of San Diego County's Gross Regional Product, and more than double 1980's output of \$6.9 billion. During 1994, manufacturing employment fell by 5,200 jobs, with most of the losses occurring in aerospace and related defense industries.

In contrast with the drop in durable goods manufacturing, employment in the nondurable goods category increased by 200, following a jump of 1,500 in 1993. Gains in biotech and apparel manufacturing accounted for the 1993 spurt, and growth in the plastics area contributed to the 1994 increase.

To facilitate the transition of the City's manufacturing base from defense to non-defense activities, the City applied for and received State and Federal funding to support a comprehensive economic conversion program. Components of the program include a High Technology Transfer Center, a Technology Business Incubator Program, a World Trade Center, and a Seed Capital Fund.

### ***Construction***

Construction employment increased (+500) in 1994, after four consecutive years of decline; construction activity, which fueled much of the County's economic expansion during the 1980's, slowed in the 1990's due to the recession and a surplus of inventory, particularly in the commercial area. An increase in residential construction activity in 1994 enabled the industry to add 500 jobs.

### ***Transportation & Utilities***

The transportation, communications and utilities sector grew for the second consecutive year, adding 100 workers, after increasing by 900 in 1993.

### ***Retail and Wholesale Trade***

Accounting for approximately 24% of total nonagricultural wage and salary employment, the trade sector, consisting of retail and wholesale trade, is a major component of the City's economy. Wholesale trade employment increased by 4.0% in 1994, after falling by 6.2% in 1993. Total trade employment was down by 100 in 1994, as a drop of 1,700 in retail trade was almost totally offset by an increase of 1,600 in wholesale trade.

### ***Finance, Insurance and Real Estate***

Employment in the finance, insurance and real estate sector fell by 2.1% in 1994, after increasing by 1.8% in 1993. The real estate outlook for 1995 will depend on the extent to which the positive effects of an improved job market offset the negative effects of higher mortgage interest rates.

## Services

The services sector, which accounted for 31% of all nonagricultural wage and salary employment in 1994, grew by 2.5% in 1994 over the previous year. Business, services (including computer services and software), research and development, and amusement were the strongest sectors for employment growth.

## Government

The government sector, which accounted for 19% of total 1994 nonagricultural wage and salary employment, grew by a modest 0.8% between 1993 and 1994. Each level of government grew in 1994: federal (+600), state (+300) and local (+600).

## Military Employment

During 1994, the U.S. Department of Defense contributed about \$9 billion to the local economy through wages paid to uniformed military and civilian personnel and through purchases of equipment and services from local businesses. The \$9 billion spending figure for San Diego County was second only to Los Angeles County. Under the latest recommendations of the Base Closure and Realignment Commission (BRAC '95), which have been approved by the President, the City will actually see an increase in local military spending, while overall defense spending continues to decline. Of major significance will be the relocation of the U.S. Space and Naval Warfare Systems Command (SPAWAR) from Virginia to the City. With an annual budget of \$4 billion, including \$2.8 billion in private sector contracts, and a workforce of 1,133 military and civilians, SPAWAR will have a substantial direct effect on the City's economy. Impact of SPAWAR would extend beyond the immediate effects because of a federal regulation which requires that private contractors with SPAWAR contracts have facilities within the immediate area. It is estimated that these indirect effects could generate an additional 1,000 to 2,000 jobs for the San Diego economy.

In addition to the SPAWAR recommendation, BRAC '95 will close the Long Beach Naval Shipyard. The shutdown of the Long Beach facility would result in increased activity for the City's five major shipyards and approximately 40 subcontractors. The Long Beach facility employs 3,100 civilians and has an estimated impact of \$750 million on that economy.

To expedite plans for the transformation from military to civilian use of the military bases in California selected for closure by the Base Closure Commission, the Governor of California established a Base Reuse Task Force, with the City's Mayor Susan Golding to serve as Chairperson. The purpose of the Commission is to promote the rapid conversion of these installations to civilian and government uses that maximize job creation and long term economic growth. Within the City, emphasis will be on rapid conversion of the Naval Training Center (NTC). The City Council has approved a recommendation to use a portion of the NTC property for the construction of approximately 500 units of Navy housing. Construction of these units would have a positive economic impact on the adjacent communities.

### ACTIVE MILITARY PERSONNEL STATIONED IN SAN DIEGO COUNTY 1990 - 1994

<u>Fiscal Year</u>	<u>Military Personnel<sup>(1)</sup></u>	<u>Civilian Labor Employment</u>	<u>Total Employment</u>	<u>Military Personnel as a Percent of Total Employment</u>
1990	134,000	1,121,600	1,255,600	10.68
1991	139,700	1,099,000	1,238,000	11.28
1992	133,700	1,109,900	1,243,600	10.75
1993	120,500	1,114,600	1,265,700	9.52
1994	125,600	1,145,200	1,271,500	9.90

Rounded to the nearest hundred.

Source: City of San Diego Chamber of Commerce; State of California Employment Development Department.

Increased military presence in 1991 may be explained by the higher level of military activity due to the Persian Gulf War. Although personnel are temporarily relocated, counting takes place at

the permanently assigned location. Reassignments to the San Diego area to cover for those shipped overseas could have brought about the increased count in the region.

## Tourism

Tourism and international trade are sectors of the economy that cut across industry lines, and, as such, should be considered separately from the more specific industry classifications addressed in the preceding section.

The visitor industry is the City's third largest in terms of income generation, behind manufacturing and the military. In 1994, the total visitor revenues generated almost 5.4% of the City's gross regional product which is estimated to be \$67.1 billion. An estimated 122,300 workers, or 13% of the total nonagricultural wage and salary employees were employed in the City's visitor industry during 1994 with an estimated payroll of \$1.6 billion. In 1994, total visitor spending was at \$3.64 billion, up by 3.6% from 1992 which was incidentally, an exceptional year for tourism industry of the City, spurred by three marquee events - the 1992 America's Cup, the Volvo World Cup Equestrian Championship, and baseball's All Star Game. The following table depicts total visitor spending in San Diego County since 1990.

According to the United States Travel & Tourism Administration (USTTA), the City continues to hold its "top ten" global ranking as a preferred vacation destination for overseas visitors. In 1994, the City zoomed to first place as an overseas destination among mainland U.S. cities which do not have direct intercontinental air service. Total overseas visitors to the City increased by 12.7% from 653,000 in 1993 to 736,000 in 1994.

### TOTAL VISITOR SPENDING SAN DIEGO COUNTY 1990 - 94 (\$ billions)

<u>Year</u>	<u>Amount</u>
1990	
1991	\$3.09
1992	3.28
1993	3.51
1994	3.45
	3.64

Source: San Diego Convention & Visitors Bureau.

Total visitor spending almost doubled (up 96%) between 1984 and 1994. Contributing to this growth has been a sharp increase in convention activity. Spending by convention delegates at the San Diego Convention Center totaled \$210 million in 1994, as can be seen in the following table, up from \$124 million in 1990.

### SAN DIEGO CONVENTION CENTER 1990 - 1994

<u>Calendar Year</u>	<u>Estimated Spending</u>	<u>Number of Conventions</u>	<u>Total Delegate Attendance</u>
1990	\$ 123,931,050		
1991	123,181,530	33	183,600
1992	184,575,546	36	195,930
1993	160,112,046	39	317,500
1994	210,435,456	52	236,600
		48	232,600

Note: Table includes only the San Diego Convention Center; it does not include other sources of convention activity in the San Diego region.

Source: San Diego Convention and Visitors Bureau.

In both 1993 and 1994, San Diego International Airport at Lindbergh Field had a record number of airport arrivals, 5.9 million and 6.5 million arrivals respectively each year. These figures represent an increase of 6.8% and 15.4% respectively each year over 1990 airport arrivals.

The City is the focal point for tourism in the region, hosting 16.9 million visitors in 1994, which is an increase by 1.8% from 1993. Major attractions located in the city include the world-renowned San Diego Zoo, the San Diego Wild Animal Park, and the Anheuser-Busch owned Sea World. While attendance figures for these attractions are no longer released, attendance was judged to be strong in 1994. Other attractions include the Cabrillo National Monument on Point Loma, which had 1.6 million visitors in 1994, Balboa Park, home to the Zoo and a host of other cultural and recreational activities, downtown's historic Gaslamp Quarter, and the Old Town State Park with 1994 attendance of 6.6 million. The City's cruise ship industry is another important sector of the local visitor industry. During 1994, nine cruise lines with 10 ships were in operation, catering to more than 260,000 passengers on one-day and multi-day cruises. Total number of vessel calls from downtown "B" Street Pier along the San Diego Harbor totaled 414.

In addition to the many permanent attractions available to visitors, the City has also been host to a number of major events. In 1992, the City hosted the America's Cup, which generated an estimated \$300 million in revenues and recently hosted the 1995 America's Cup. The City has also hosted a Super Bowl (Super Bowl XXII, held in January, 1988) and has been selected to host Super Bowl XXXII, scheduled for January 1998. The 1988 Super Bowl generated approximately \$130 million in revenues. In addition, the City is the chosen site for the Republican National Convention to be held in August 1996.

#### International Trade

The City has experienced substantial growth in international trade in recent years, despite sluggish performance in some other key sectors of the local economy. The City is one of California's three major port complexes and a gateway to the fast growing Pacific Rim. The volume of foreign trade through the City's ports has increased by more than 17% per year since 1983, twice the national growth rate. The cargo handling activity in 1994 was at the highest level in four years. From January to October 1994, tonnage through the port totaled 868,000 metric tons, which is an increase of 81% from 1993. During 1993, the total dollar value of international trade passing through the San Diego customs district increased by 7% to more than \$10.8 billion, with exports of \$5.6 billion and imports of \$5.2 billion. Between 1983 and 1993, the value of international trade grew at an annual rate of 16%. The following table depicts total valuation of international trade for the San Diego region since 1986.

**VALUATION OF INTERNATIONAL TRADE  
SAN DIEGO CUSTOMS DISTRICT  
1986 - 1993  
(\$ billions)**

<u>Year</u>	<u>Amount</u>
1986	\$ 3.8
1987	4.4
1988	6.0
1989	7.1
1990	7.8
1991	8.7
1992	10.1
1993	10.8

Source: U.S. Department of Commerce.

While not all of the products exported through the San Diego customs district originate in the City, a substantial percentage can be attributed to local businesses. Manufactured products accounted for 97.8% of the total export sales, with agricultural and other commodities accounting for the remaining 2.2%. The share of the City in the total state exports for 1993 is 6.4%, ranking behind San Francisco and Los Angeles. The major components of the City's manufacturing exports are electrical/electronic machinery, non-electrical machinery, scientific instruments, and transportation equipment.

Mexico accounts for 42.4% of the total exports from the City, followed by Canada at 9.2% and Japan at 6.8%. The other significant trading partners are divided between Asia and western Europe. With its border location and a diversified manufacturing base, the City is well positioned to take advantage of NAFTA and the demand of Mexico's growing economy. While preliminary data for California and the U.S. suggest that NAFTA provided a boost to Mexico bound exports in 1994, the outlook for 1995 has been dimmed somewhat by the December 1994 peso devaluation. According to the Federal Reserve Bank of San Francisco, the last major peso devaluation in 1982 resulted in a 50% drop in U.S. exports to Mexico between 1981 and 1983. CASAS Information Services, a local research body which tracks cross-border activity, reported that the devaluation precipitated an initial 38% drop in exports through February 1995. However, since a large percentage of the City's exports to Mexico are in the form of semi-finished products shipped to Tijuana based "maquiladoras" for re-export to the U.S., the relative effects on the City based firms may be less than in other parts of the U.S.

#### **Major Employers**

Industry in the San Diego area is diverse. Some of the leading industries include Education and Health Services, Aerospace, Financial Services, Food Services, Manufacturing and Entertainment. The following chart sets out major employers in the City as of June 1995.

**MAJOR EMPLOYERS\***  
*As of June 1995*

**Company**

**Product/Service**

**10,000 or More Employees:**

San Diego Unified School District  
Sharp Health Care  
University of California, San Diego

Education  
Health Service  
Higher Education

**5,000 - 9,999 Employees:**

San Diego Community College District  
Scripps Institutions of Medicine and Science  
U. S. Postal Service

Higher Education  
Health Services  
Services

**3,000 - 4,999 Employees:**

Cubic Corporation  
Kaiser Permanente Medical Care Program  
National Steel & Shipbuilding Co.  
Pacific Bell  
Rohr Industries  
San Diego Gas & Electric  
San Diego State University  
Science Applications International Corp.  
Solar Turbines, Inc.  
University of California San Diego Medical Center

Electronic Systems  
Health Care  
Shipbuilding, Repair  
Utility  
Aerospace  
Utility  
Higher Education  
Research and Development  
Gas Turbine Manufacturing  
Health Services

**2,000 - 2,999 Employees:**

Bank of America  
Catholic Diocese of San Diego  
Foodmaker, Inc.  
Lucky Stores  
Manpower Temporary Services  
Mercy Hospital & Health Centers  
Nordstrom  
Palomar Pomerado Health Systems  
Price Club & Costco Wholesale  
Sony Engineering & Manufacturing of America  
Target Stores - San Diego  
Vons Grocery Company  
Wells Fargo Bank

Banking  
Churches/Schools  
Food Services  
Food Services  
Employment Services  
Health Care  
Retail  
Health Care  
Wholesale Warehouses  
Electronics  
Retail  
Food Services  
Banking

\* Does not include various major public employers.  
Source: Greater San Diego Chamber of Commerce

**Effective Buying Income**

"Effective Buying Income" (EBI), also referred to as "disposable" or "after-tax" income, consists of personal income less personal tax and certain non-tax payments. Personal income includes wages and salaries, other labor-related income (such as employer contributions to private pension funds), and certain other income (e.g., proprietor's income; rental income; dividends and interest; pensions; and welfare assistance). Deducted from this total are personal taxes (federal, state and local), certain non-tax payments (e.g., fines, fees and penalties), and personal contributions to a retirement program.

The following table shows the per capita effective buying income for the City, the County, the State, and the United States between 1990 and 1994.

**PER CAPITA EFFECTIVE BUYING INCOME**

	<u>City of San Diego</u>	<u>County of San Diego</u>	<u>State of California</u>	<u>United States</u>
1990	\$15,623	\$15,391	\$15,255	\$13,158
1991	16,377	16,067	15,741	13,952
1992	15,819	15,681	15,843	14,702
1993	16,181	15,947	16,124	15,255
1994	16,667	16,485	16,672	16,064

Note: Revised as of February 1995.

Source: Sales & Marketing Management Magazine "Survey of Buying Power".

### **Business Development Program**

The City recognizes the need to improve the local business climate and to aggressively support economic development and job creation activities. To achieve this, the City has established a comprehensive Business Development Program. A key element of this program is the Business Expansion and Retention Program which represents a new pro-active effort on the part of the City to work directly with businesses to improve the retention rate among local firms and to expand the level of investment and job growth.

A primary focus of the City's overall business development effort is to streamline the current permitting process and, when feasible, to eliminate or reduce existing fees and permits. To facilitate this process within the City, an Economic Development Cabinet (EDC), composed of those City departments directly involved in the permitting process (Engineering and Development, Building Inspection, Planning, and Neighborhood Code Compliance) was established. The specific objective of the EDC is to establish a "one-stop" permitting process that will reduce the development permit processing time by as much as one-half. As part of the City's Economic Strategic Plan, the City's Ombuds Program provides assistance to targeted industries like the high tech and biomed/biotech communities. This assistance includes permit expediting, preliminary plan review, and assistance with inspection issues. Firms that were recently assisted through this program include GDE Systems, McDonnell Douglas, and Ligand Pharmaceuticals. In FY 1994, this proactive assistance helped to create and retain 7,748 jobs. The total valuation of building permits expedited exceeds \$91 million.

As part of the City's efforts to make the City more business-friendly, the City Council has inaugurated the City's Business Resource Station in 1993, which is an interactive information center designed to provide aspiring entrepreneurs with everything they need to know about starting a small business in the City. In 1994, the City Council reduced the Business License Tax for all businesses with 12 or fewer employees and reduced it even further, from \$125 to \$34, in July 1995. In addition, at the City's request, the County's Air Pollution Control District (APED) exempted more than 50 San Diego employers from having to file required traffic abatement plans or from having to pay the filing fee.

### **Commercial Activity**

In downtown San Diego, significant commercial development has occurred over the last several years as a result of the City's redevelopment efforts. Seaport Village, a 13-acre specialty retail development which opened in 1980, contains 99,000 square feet of specialty retail. The total current assessed valuation is \$13 million. Planning and design are currently underway for an expansion of Seaport Village to include an additional 150,000 square feet of retail and related parking. Development value is estimated at \$50 million. Horton Plaza, a major mixed use-retail, entertainment and parking complex, opened in August 1985. Three major department stores and approximately 150 specialty shops occupy the 900,000 square foot mixed-use center. In March 1995, a 12,750 square-foot restaurant opened after a \$16 million renovation to a four-story structure formerly occupied by a Robinsons-May department store. The current assessed value of Horton Plaza is \$126 million. The recently completed Paladion is a three-story, plus roof terrace, high-end retail complex containing approximately 105,000 square feet of retail and restaurant use.

The Emerald Plaza, previously known as Emerald-Shapery Center, completed in April 1991, is a mixed-use development containing a 375,000 square foot, 30-story office tower, a 27-story 475-room hotel with health club, retail space and restaurants. One America Plaza consists of a hotel, an office development, and an integrated major light-rail transit station for the trolley. The 660,000 square foot office tower with the station was completed in December 1991. The current assessed value is \$112 million.

Approximately 2,900 housing units have been constructed including senior citizen housing, market rate condominiums, market rate rental units, luxury condominiums and low and moderate income housing. The Meridian, a 27-story luxury residential tower containing 172 condominium units, completed in 1985, currently has an assessed value of \$103 million. Construction is underway on 321 condominium units and plans for two apartment projects, Cortez Hill and Marina Walk, were recently approved by the Centre City Development Corporation. The combined value of the two projects is estimated to be \$57 million.

Hotel development consisting of approximately 3,200 hotel rooms has been completed, including the San Diego Marriott Hotel and Marina, Embassy Suites Hotel and the Pan Pacific Hotel of the Emerald-Shapery Center. The Hyatt Regency Hotel, containing approximately 875 rooms located southeast of Seaport Village, opened in December 1992, with an assessed valuation of approximately \$147 million. The San Diego Convention Center, with 254,000 square feet of prime exhibit space, costing approximately \$160 million, was completed in November 1988. The Center will nearly double its size by December 1997, by adding 302,000 square feet of exhibit space and 100,000 square feet of meeting rooms. With this \$145-\$160 million expansion, the Center is expected to capture 13% more of the current market share which will translate into an estimated impact of \$920 million to the local economy. In addition, preliminary planning and site analysis has begun on a proposed downtown sports arena. Of course, any new development is subject to general and local economic conditions as well as availability of funding sources.

#### **Research Facilities**

Among the more important local research facilities are the Scripps Clinic and Research Foundation, the Naval Electronics Laboratory Center, the Palomar Observatory and the Salk Biological Research Institute.

The City was selected as the design integration site for the \$1.2 billion Engineering Design Phase of the International Thermonuclear Experimental Reactor (ITER) project, an internationally funded program to demonstrate the scientific and technological feasibility of using magnetic fusion as a source of electrical power. The ITER facility is located in the Torrey Pines Scenic Park. The University of California at San Diego, through its subcontractor Science Applications, Inc., provides administrative oversight and on-site operational support. The project is expected to serve as a spawning ground to spinoff technologies and businesses, similar to the role played by the Scripps and Salk Institutes, two organizations that provided the catalyst for the City's biomedical industry.

#### **Growth Companies**

Many businesses in the City offer new products in high technology areas ranging from computer graphics to genetic engineering. The following is a list of some of these companies:

<u>Company</u>	<u>Profile/Comments</u>
Qualcomm, Inc.	Qualcomm develops, manufactures, markets, licenses, and operates advanced communications systems and products based on digital wireless technology. Revenues for the six month period ending 3/26/95 were up 37%.
Brooktree Corp.	Brooktree develops, and markets high-performance digital and mixed-signal integrated circuits for computer graphics, imaging/multimedia communications and automatic testing equipment. The firm started in 1981 with 4 employees and currently supports an annual payroll of \$24 million.
Encad, Inc.	Encad designs, manufactures and markets wide-format, color inkjet printer/plotters for computer applications. For



the quarter ending 3/95, total revenues were up 70% to 14.7 million and net earnings increased 98% to \$2 million.

**Hitachi Home Electronics**

The firm relocated its new manufacturing division headquarters from Anaheim, California to San Diego's Otay Mesa industrial area. The Otay facility will provide warehousing, laboratory and other support services to its assembly plant in nearby Tijuana, Mexico.

**Science Applications International Corporation (SAIC)**

An international scientific research firm, headquartered in the City, with a local payroll of approximately 4,000 employees and annual sales of \$1.5 billion. As the City's largest defense contractor, SAIC conducted \$474 million in procurement contracting for the military during 1994.

**Aldila, Inc.**

Aldila is a leading designer and manufacturer of high-quality innovative graphite golf shafts and currently has approximately one-half of the U.S. graphite shaft market. For the fiscal year ending December 31, 1994, net income increased by 63%.

**Proxima Corporation**

Proxima designs, develops, manufactures and markets liquid crystal display projection products that provide power flexibility to computers. For the 9 month period ending 12/94, net earnings were up almost four fold from \$2.4 million to \$9.2 million.

**Cohu, Inc.**

Cohu, Inc. manufactures and supplies closed circuit television cameras and systems, microwave radio and equipment, metal detectors, and gravity feed integrated circuit test handlers. For the fiscal year ending 12/94, net earnings soared 49% to \$10.1 million.

The following companies constructed new facilities within the last year:

<b>Matsushita Television Co.</b>	Televisions manufacturer
<b>Sony Engineering &amp; Manufacturing of America</b>	Televisions manufacturer
<b>Qualcomm</b>	Telecommunications manufacturer
<b>Applied Micro Circuits</b>	Integrated circuits manufacturer
<b>Psicor</b>	Computer boards manufacturer
<b>Hewlett-Packard</b>	Computer peripherals manufacturer

**Transportation**

The City has a well-developed and relatively uncongested highway system. Access in and out of the region is provided by five major freeways running north and south and three freeways running east and west.

Public transportation through the City and metropolitan surrounding communities is provided by the San Diego/Metropolitan Transit Development Board (MTDB). The San Diego Trolley, Inc. operates a fleet of electric trolleys that provides transportation for commuters and tourists from downtown San Diego to San Ysidro (adjacent to Tijuana), and from downtown San Diego to South east San Diego and East County. In addition, the newest expansion of the trolley provides transportation service from downtown San Diego to the waterfront area, including the Convention Center. Construction is in progress on an extension that will provide service from downtown to the historical Old Town section of the City. The Old Town extension, which will feature a 1871 vintage

terminal located in the Old Town State Park, is scheduled for completion in January, 1996. Design work has been completed on the next extension, which will go from Old Town through the Mission Valley area, ending at San Diego Jack Murphy Stadium. Service is scheduled to begin on the Mission Valley extension in late-1997. A further extension of the trolley is under construction in the East County, which will link the City of Santee with the City of El Cajon and, via the existing East County line, to downtown San Diego. In addition, a 43-mile Coaster Commuter rail line from Oceanside to downtown San Diego came into service in February, 1995. This line links communities along the coast from Oceanside to Del Mar with downtown San Diego and is operated by North County Transit District (NCTD).

Proposition A, voter approved in November 1987, authorized a one-half cent increase to the local sales tax to fund transportation improvements for the San Diego region. The City expects to receive \$123 million in fiscal years 1994-2000, from this source.

State Propositions 108, 111, 116, voter approved in June 1990, increased the State Gas Tax and authorized the sale of rail bonds. The revenues generated from these measures are to be used to implement a comprehensive statewide transportation funding program through the year 2000. Increased revenues to the City resulting from Proposition 111's increased gas tax subventions are estimated at \$66.7 million over the ten year period, 1991-2000. Revenues from this source supplement the City's street maintenance program, and contribute to capital improvements.

State Proposition 108, the Passenger Rail and Clean Air Act, also authorized the sale of general obligation rail transit bonds by the State of California. These rail bonds are to be used to fund up to 50% of the non-Federal cost of eligible projects throughout the State. Eligible transit projects under this program include all of the trolley and commuter rail corridors, with a possibility of \$100 to \$150 million available for trolley and commuter rail projects within the San Diego region. The designated recipients to develop rail infrastructure in the region are MTDB and NCTD.

A related State ballot measure, Proposition 116, the Clean Air and Transportation Improvement Act, generated revenue from the sale of \$1.99 billion in general obligation rail bonds providing specific allocations to finance rail infrastructure, including intercity, commuter and light rail transit statewide. Similar to State Proposition 108, MTDB and NCTD would be the designated recipients for the San Diego region; \$45 million is estimated to be spent in San Diego County.

## **MUNICIPAL GOVERNMENT AND FINANCIAL INFORMATION**

### **Governmental Organization**

The City is a chartered city and operates under the Council-Manager form of government. The City Council is comprised of eight members elected by district to serve overlapping four-year terms. The Mayor, who presides over the City Council, is elected at large to serve a four-year term. The City Council, which acts as the City's legislative and policy-making body, selects the City Manager, who is the City's chief administrator and is responsible for implementing the policies and programs adopted by the City Council.

### **Accounting Practices**

The City's accounting policies conform to generally accepted accounting principles applicable to governmental units. The City's Governmental Funds and Expendable Trust and Agency Funds use the modified accrual basis of accounting. Under the modified accrual basis of accounting, revenues are recorded when both available and measurable. Certain fines and forfeitures, however, are recorded when received as they are not susceptible to accrual. Expenditures are recognized when the related liability is incurred except for (1) principal of and interest on general long-term debt which are recognized when due; and (2) employee annual leave and claims and judgments for litigation and self-insurance which are recorded in the period due and payable. Proprietary Fund, Pension Trust and Nonexpendable Trust Funds use the accrual basis of accounting. Under the accrual basis of accounting, revenues are recognized when earned, and expenses are recorded when incurred.

The City prepares financial statements annually in conformity with generally accepted accounting principles for governmental entities which are audited by an independent certified public accountant. The annual audit report is generally available about six months after the June 30 close of each fiscal year. The City's most recent general purpose financial statements for the fiscal year ended June 30, 1994 were audited by Calderon, Jaham & Osborn, CPAs.

## **Budgetary Process**

The City's annual budget, which is published in November, is the culmination of the annual budget process which begins in the fall of the preceding year. Public input on service and program priorities is solicited. This input serves as part of the City Council's priority setting for the City Manager's development of the budget.

Based upon City Council budget priorities, departments submit operating and capital improvement project requests to the City Manager for review by the Financial Management Department. The City Manager evaluates and prioritizes the program requirements, determines funding availability and develops a balanced budget as required by the City Charter. This proposed balanced budget is published and presented to the City Council during April.

City Council review of the proposed budget is conducted during May and June. The first two meetings are dedicated to public comment, while the balance of the meetings are conducted as Council workshops focusing on policy issues.

As required by the City Charter, the City Council adopts the Annual Budget and Appropriation Ordinance no earlier than the date of the first Council meeting in July and no later than the last meeting in July. The adoption of the Appropriation Ordinance requires two noticed public hearings which are usually held on consecutive days. The Annual Tax Rate Ordinance is adopted no later than the last Council meeting in August.

The Financial Management Department works closely with the City Auditor and Comptroller to monitor fund balances. Variations from budget or plans are alleviated in a number of ways, including expenditure reductions or deferrals. Short term issues are resolved with short term solutions. Because the recent persistent recessionary environment has lasted longer than usual, the City has begun to implement longer term solutions such as using the City's revenue raising flexibility and making permanent reductions to programs.

**APPENDIX D**

**DEFINITIONS OF CERTAIN TERMS**

## APPENDIX D

### DEFINITIONS OF CERTAIN TERMS

The following is a summary of certain definitions set forth in the Indenture, the Installment Purchase Agreement and the Continuing Disclosure Agreement. These summaries do not purport to be comprehensive and reference should be made to such documents for a full and complete statement of such definitions. All capitalized terms not defined in this summary or this Official Statement shall have the meanings set forth in the Indenture and in the Installment Purchase Agreement.

**"Accountant's Report"** means a report signed by an Independent Certified Public Accountant.

**"Acquisition Costs"** means all costs of acquiring, constructing, installing or improving the Project, including but not limited to: (i) all costs which the Authority or the City shall be required to pay to a manufacturer, vendor or contractor or any other person under the terms of any contract or contracts for the acquisition, construction, installation or improvement of the Project; (ii) obligations of the Authority or the City incurred for labor and materials (including obligations payable to the Authority or the City for actual out-of-pocket expenses of the Authority or the City) in connection with the acquisition, construction, installation or improvement of the Project, including reimbursement to the Authority or the City for all advances and payments made in connection with the Project prior to or after delivery of the Bonds; (iii) the costs of performance or other bonds and any and all types of insurance that may be necessary or appropriate to have in effect during the course of acquisition, construction, installation or improvement of the Project; (iv) all costs of engineering and architectural services, including the actual out-of-pocket costs of the Authority or the City for test borings, surveys, estimates, plans and specifications and preliminary investigations therefor, development fees and sales commissions, and for supervising acquisition, construction, installation and improvement, as well as for the performance of all other duties required by or consequent to the proper acquisition, construction, installation or improvement of the Project; and (v) any sums required to reimburse the Authority or the City for advances made by the Authority or the City for any of the above items or for any other costs incurred and for work done by the Authority or the City which are properly chargeable to the acquisition, construction, installation or improvement of the Project.

**"Additional Bonds"** means all revenue bonds of the Authority which are secured by Installment Payments authorized by and at any time Outstanding pursuant to the Indenture and executed, issued and delivered in accordance with the Indenture.

**"AMBAC Indemnity"** means AMBAC Indemnity Corporation, a Wisconsin-domiciled stock insurance company.

**"Annual Debt Service"** means, for any Fiscal Year, the sum of (i) the interest payable on all Outstanding Bonds in such Fiscal Year, assuming that all Outstanding Serial Bonds are retired as scheduled and that all Outstanding Term Bonds are redeemed or paid from sinking fund payments as scheduled (except to the extent that such interest is to be paid from the proceeds of the sale of any Bonds); (ii) the principal amount of all Outstanding Serial Bonds maturing by their terms in such Fiscal Year; and (iii) the principal amount of all Outstanding Term Bonds required to be redeemed or paid in such Fiscal Year (together with the redemption premiums, if any, thereon).

**"Annual Report"** means any Annual Report provided by the City pursuant to, and as described in, the Continuing Disclosure Agreement.

**"Auditor and Comptroller"** means the Auditor and Comptroller of the City.

**"Authority"** means the Public Facilities Financing Authority of the City of San Diego, a California joint exercise of powers entity.

**"Authorized City Representative"** means the Mayor, the City Manager or the Treasurer of the City or such other officer or employee of the City or other person who has been designated as such representative by resolution of the City Council of the City.

**"Authorized Denominations"** means \$5,000 and any integral multiple thereof.

**"Authorizing Ordinance"** means the ordinance pursuant to which the Installment Purchase Agreement was authorized and any additional Ordinance or official authorizing act of the Council of the City approving execution and delivery of any Supplement to the Installment Purchase Agreement or any Issuing Instrument.

**"Balloon Indebtedness"** means, with respect to any Series of Obligations, 25% or more of the principal of which matures on the same date or within a 12-month period with sinking fund payments on Term Obligations deemed to be payments of matured principal, that portion of such Series of Obligations which matures on such date or within such date or within such 12-month period; provided, however, that to constitute Balloon Indebtedness the amount of indebtedness maturing on a single date or over a 12-month period must equal or exceed 150% of the amount of such Series of Obligations which matures during any preceding 12-month period. For purposes of this definition, the principal amount maturing on any date shall be reduced by the amount of such indebtedness which is required, by the documents governing such indebtedness, to be amortized by prepayment or redemption prior to its stated maturity date.

**"Beneficial Owner"** means any person which has or shares the power, directly or indirectly, to make investment decisions concerning ownership of, any 1995 Bonds (including persons holding 1995 Bonds through nominees, depositories or other intermediaries).

**"Board"** means the Board of Directors of the Authority.

**"Bond Counsel"** means a firm of attorneys which are nationally recognized as experts in the area of municipal finance.

**"Bond Insurance Policy"** means the municipal bond new issue insurance policy issued by the Bond Insurer that guarantees payment of principal of and interest on the 1995 Bonds.

**"Bond Insurer"** means Financial Guaranty Insurance Company, doing business in California as FGIC Insurance Company, a New York stock insurance company, or any successor thereto.

**"Bonds"** means the 1993 Bonds, the 1995 Bonds and all Additional Bonds.

**"Business Day"** means a day of the year which is not a Saturday or Sunday, or a day on which banking institutions located in California are required or authorized to remain closed, or on which the New York Stock Exchange is closed. If the date for making any payment or the last date for performance of any act or the exercising of any right, as provided in the Indenture, shall not be a Business Day, such payment may be made or act performed or right exercised on the next succeeding Business Day, with the same force and effect as if done on the nominal date provided in the Indenture, and, unless otherwise specifically provided in the Indenture, no interest shall accrue for the period from and after such nominal date.

**"Certificate of Completion"** means a Certificate of the City filed with the Trustee, stating that the Components of the Project being financed with the proceeds of the Bonds have been acquired, constructed, installed and improved and that all Acquisition Costs have been paid or provided for.

**"Certificate of the City"** means an instrument in writing signed by the City Manager, Financial Management Director or City Attorney of the City, or by any other officials of the City duly authorized by the City for that purpose.

**"Charter"** means the Charter of the City as it now exists or may be amended, and any new or successor Charter.

**"City"** means the City of San Diego, a municipal corporation duly organized and existing under its Charter and the Constitution of the State.

**"Closing Date"** means, with respect to the 1995 Bonds, December 13, 1995.

**"Code"** means the Internal Revenue Code of 1986, as amended, and the regulations thereunder, and any successor laws or regulations.

**"Component Installment Payments"** means the Installment Payments specified in the 1995-1 Supplement which are to pay the Purchase Price of the Components.

**"Component Obligation Series 1995"** means the 1995 Bonds.

**"Components"** means components of the Project specified in the 1995-1 Supplement.

**"Consultant"** means the consultant, consulting firm, engineer, architect, engineering firm, architectural firm, accountant or accounting firm retained by the City to perform acts or carry out the duties provided for such consultant in the Installment Purchase Agreement. Such consultant, consulting firm, engineer, architect, engineering firm or architectural firm shall be nationally recognized within its profession for work of the character required. Such accountants or accounting firm shall be an Independent Certified Public Accountant licensed to practice in the State.

**"Continuing Disclosure Agreement"** means that certain Continuing Disclosure Agreement between the City and the Trustee, dated as of December 1, 1995, as originally executed and as it may be amended from time to time in accordance with the terms thereof.

**"Contracts"** means any contract or lease of the City (including the Installment Purchase Agreement) authorized and executed by the City, the installment or lease payments of which are payable from the Net System Revenues and which are on a parity with the Installment Payments.

**"Corporate Trust Office of the Trustee"** means the principal corporate trust office of the Trustee in Los Angeles, California or such other or additional offices as may be specified to the Authority by the Trustee in writing.

**"Costs of Issuance"** means all items of expense directly or indirectly payable by or reimbursable to the City or the Authority relating to the issuance, sale and delivery of the Bonds and the execution and delivery of the Indenture and the Installment Purchase Agreement, filing and recording costs, settlement costs, printing costs, reproduction and binding costs, initial fees and charges of the Trustee (including legal fees), financing discounts, legal fees and charges, insurance fees and charges, financial and other professional consultant fees, fees and charges of rating agencies and/or for credit ratings, fees for transportation and safekeeping of the Bonds and charges and fees in connection with the foregoing.

**"Credit Facility"** means any line of credit, letter of credit, insurance policy, surety bond or other credit source deposited with the Trustee pursuant to the Indenture.

**"Credit Provider"** means any municipal bond insurance company, bank or other financial institution or organization which is performing in all material respects its obligations under any Credit Support arrangements for some or all of the Parity Obligations.

**"Credit Provider Reimbursement Obligations"** means obligations of the City to repay, from Net System Revenues, amounts advanced by a Credit Provider as credit support or liquidity for Parity Obligations.

**"Credit Support"** means a policy of insurance, a letter of credit, a stand-by purchase agreement, revolving credit agreement or other credit arrangement pursuant to which a Credit Provider provides credit or liquidity support with respect to the payment of interest, principal or the purchase price of any Parity Obligations.

**"Debt Service"** means for any Fiscal Year, the sum of (i) the interest payable during such Fiscal Year on all outstanding Parity Obligations, assuming that all outstanding Serial Parity Obligations are retired as scheduled and that all outstanding Term Parity Obligations are redeemed or paid from sinking fund payments as scheduled (except to the extent that such interest is to be paid from the proceeds of sale of any Parity Obligations); (ii) that portion of the principal amount of all outstanding Serial Parity Obligations maturing on the next succeeding principal payment date which falls in such Fiscal Year, (excluding Serial Obligations which at the time of issuance are intended to be paid from the sale of a corresponding amount of Parity Obligations); (iii) that portion of the principal amount of all outstanding Term Parity Obligations required to be redeemed or paid on any redemption date which falls in such Fiscal Year (together with the redemption premiums, if any, thereon); provided that, (i) as to any Balloon Indebtedness, Tender Indebtedness and Variable Rate Indebtedness, interest thereon shall be calculated as provided in the definition of Maximum Annual Debt Service and principal shall be deemed due at the nominal maturity dates thereof; (ii) the amount on deposit in a debt service reserve fund on any date of calculation of Debt Service shall be deducted from the amount of principal due at the final maturity of the Parity Obligations for which such debt service reserve fund was established and in each preceding year until such amount is exhausted; (iii) the amount of any interest payable on any Parity Obligation for which there exists a Qualified Swap Agreement shall be the net amount payable by the City as provided in paragraph (iv) or (viii), as applicable, of the definition of Maximum Annual Debt Service, and (iv) the amount of payments on account of Parity Obligations which are redeemed, retired or repaid on the basis of accreted value due on the scheduled redemption, retirement or repayment date shall be deemed principal payments, and interest that is compounded and paid as part of the accreted value shall be deemed payable on the scheduled redemption, retirement or repayment date but not before.

**"Defaulted Obligations"** means Obligations in respect of which an Event of Default has occurred and is continuing.

**"Depository"** means the securities depository acting as Depository pursuant to the Indenture.

**"Disclosure Representative"** means the Director of Financial Management of the City or his or her designee, or such other person as the City shall designate in writing to the Trustee from time to time.

**"Dissemination Agent"** means State Street Bank and Trust Company of California, N.A., acting in its capacity as Dissemination Agent under the Continuing Disclosure Agreement, or any successor Dissemination Agent designated in writing by the City which has filed with the Trustee a written acceptance of such designation.

**"District"** means the San Diego Area Wastewater Management District created under Chapter 803 of 1992 Session Laws.

**"Federal Securities"** means bills, certificates of indebtedness, notes, bonds or other securities which are direct obligations of, or are obligations guaranteed as to principal and interest by, or the principal and interest of which are secured by bills, certificates of indebtedness, notes, bonds or other securities which are direct obligations of or are guaranteed as to principal and interest by, the United States of America, whether issued in book entry form or otherwise; direct obligations of the Export-Import Bank of the United States; consolidated debt obligations of the Federal Home Loan Banks; participation certificates and senior debt obligations of the Federal Home Loan Mortgage Corporation; debentures of the Federal Housing Administration; mortgage-backed securities (except stripped mortgage securities which are valued greater than par on the portion of unpaid principal); and senior debt obligations of the Federal National Mortgage Association; participation certificates of the General Services Administration; guaranteed mortgage-backed securities and guaranteed participation certificates of the Government National Mortgage Association; guaranteed participation certificates and guaranteed pool certificates of the Small Business Association; local authority bonds of the U.S. Department of Housing & Urban Development; guaranteed Title XI financings of the U.S. Maritime Administration; guaranteed transit bonds of the Washington Metropolitan Area Transit Authority; and stripped obligations of the Resolution Funding Corporation (stripped with the Federal Reserve Bank of New York).

**"First Supplemental Indenture"** means the First Supplemental Indenture, dated as of May 1, 1994, between the Authority and the Trustee, supplementing and amending the Original Indenture.



**"Fiscal Year"** means the period beginning on July 1 of each year and ending on the next succeeding June 30, or any other twelve-month period selected and designated as the official Fiscal Year of the City.

**"Indenture"** means the Prior Indenture, as amended by the Second Supplemental Indenture and as it may from time to time be amended or supplemented by all Supplemental Indentures executed pursuant to the provisions of the Original Indenture.

**"Independent Certified Public Accountant"** means any firm of certified public accountants appointed by the City, and each of whom is independent pursuant to the Statement on Auditing Standards No. 1 of the American Institute of Certified Public Accountants.

**"Independent Engineer"** means any registered engineer or firm of registered engineers of national reputation generally recognized to be well qualified in engineering matters relating to wastewater systems, appointed and paid by the City.

**"Information Services"** means Financial Information, Inc. "Daily Called Bond Service," 30 Montgomery Street, 10th Floor, Jersey City, New Jersey 17302, Attention: Editor; Kenny Information Services' "Called Bond Service," 65 Broad Street, 16th Floor, New York, New York 10006; Moody's Investors Service, Inc. "Municipal and Government," 99 Church Street, 8th Floor, New York, New York 10007, Attention: Municipal News Reports; and Standard and Poor's Corporation's "Called Bond Record," 25 Broadway, 3rd Floor, New York, New York 10004; or, in accordance with then current guidelines of the Securities and Exchange Commission, to such other addresses and/or such other services providing information with respect to called bonds, or to such services as the Authority may designate in a Certificate of the Authority delivered to the Trustee.

**"Installment Payment Date"** means any date on which an Installment Payment is due as specified thereto in or determined pursuant to a Supplement.

**"Installment Payments"** means the Installment Payments scheduled to be paid by the City under and pursuant to the Installment Purchase Agreement or any Supplement thereto.

**"Installment Payment Obligations"** means Obligations consisting of or which are supported in whole by Installment Payments.

**"Installment Purchase Agreement"** means the Master Installment Purchase Agreement, dated as of September 1, 1993, entered into between the Authority, as seller, and the City, as purchaser, and as amended and supplemented by the 1993-1 Supplement and the 1995-1 Supplement and as it may from time to time be further amended and supplemented pursuant to the provisions thereof.

**"Interest Payment Date"** means each May 15 and November 15.

**"Interest Portion"** means the interest portion of Component Installment Payments specified in the 1995-1 Supplement.

**"Issuing Instrument"** means any indenture, trust agreement or Installment Purchase Agreement including any Supplement under which Obligations are issued or created.

**"Law"** means the Charter and all laws of the State supplemental thereto.

**"Listed Events"** means any of the events listed in Section 5(a) of the Continuing Disclosure Agreement.

**"Maintenance and Operation Costs of the Metropolitan System"** means (i) a Qualified Take or Pay Obligation related to the Metropolitan System; and (ii) reasonable and necessary costs spent or incurred by the City for maintaining and operating the Metropolitan System, calculated in accordance with generally accepted accounting principles, including (among other things) the reasonable expenses of management and repair and other expenses necessary to maintain and preserve the Metropolitan System in good repair and working order, and including

administrative costs of the City attributable to the Components which are part of the Metropolitan System, salaries and wages of employees, payments to employees retirement systems (to the extent paid from Metropolitan System Revenues), overhead, taxes (if any), fees from auditors, accountants, attorneys or engineers and insurance premiums, and including all other reasonable and necessary costs of the City or charges required to be paid by it to comply with the terms of the Obligations the proceeds of which are used to acquire Components which are part of the Metropolitan System, including any amounts required to be deposited in the Rebate Fund pursuant to the Tax Certificate relating to the financing of Components which are part of the Metropolitan System, fees and expenses payable to any Credit Provider (other than in repayment of a Credit Provider Reimbursement Obligation), and including expenses incurred or accrued incident to the formation of an entity to which the City may transfer substantially all of the Metropolitan System pursuant to the Installment Purchase Agreement, but excluding in all cases (i) depreciation, replacement and obsolescence charges or reserves therefor; (ii) amortization of intangibles or other bookkeeping entries of a similar nature; (iii) costs of capital additions, replacements, betterments, extensions or improvements to the Metropolitan System, which under generally accepted accounting principles are chargeable to a capital account or to a reserve for depreciation; (iv) charges for the payment of principal and interest on any general obligation bond heretofore or hereafter issued for Metropolitan System purposes; and (v) charges for the payment of principal and interest on account of any Obligation.

**"Maintenance and Operation Costs of the Municipal System"** means (i) a Qualified Take or Pay Obligation related to the Municipal System; and (ii) reasonable and necessary costs spent or incurred by the City for maintaining and operating the Municipal System, calculated in accordance with generally accepted accounting principles, including (among other things) the reasonable expenses of management and repair and other expenses necessary to maintain and preserve the Municipal System in good repair and working order, and including administrative costs of the City attributable to the Components which are part of the Municipal System, salaries and wages of employees, payments to employees retirement systems (to the extent paid from Municipal System Revenues), overhead, taxes (if any), fees from auditors, accountants, attorneys or engineers and insurance premiums, and including all other reasonable and necessary costs of the City or charges required to be paid by it to comply with the terms of the Obligations the proceeds of which are used to acquire Components which are part of the Municipal System, including any amounts required to be deposited in the Rebate Fund pursuant to the Tax Certificate relating to the financing of Components which are part of the Municipal System, fees and expenses payable to any Credit Provider (other than in repayment of a Credit Provider Reimbursement Obligation), but excluding in all cases (i) depreciation, replacement and obsolescence charges or reserves therefor; (ii) amortization of intangibles or other bookkeeping entries of a similar nature; (iii) costs of capital additions, replacements, betterments, extensions or improvements to the Municipal System, which under generally accepted accounting principles are chargeable to a capital account or to a reserve for depreciation; (iv) charges for the payment of principal and interest on any general obligation bond heretofore or hereafter issued for Municipal System purposes; and (v) charges for the payment of principal and interest on account of any Obligation.

**"Maintenance and Operation Costs of the Wastewater System"** means (i) a Qualified Take or Pay Obligation related to the Wastewater System; and (ii) reasonable and necessary costs spent or incurred by the City for maintaining and operating the Wastewater System, calculated in accordance with generally accepted accounting principles, including (among other things) the reasonable expenses of management and repair and other expenses necessary to maintain and preserve the Wastewater System in good repair and working order, and including administrative costs of the City attributable to the Project and the Installment Purchase Agreement, salaries and wages of employees, payments to employees retirement systems (to the extent paid from System Revenues), overhead, taxes (if any), fees from auditors, accountants, attorneys or engineers and insurance premiums, and including all other reasonable and necessary costs of the City or charges required to be paid by it to comply with the terms of the Obligations, including this Installment Purchase Agreement, including any amounts required to be deposited in the Rebate Fund pursuant to the Tax Certificate, relating to the financing of Components which are part of the Wastewater System, fees and expenses payable to any Credit Provider (other than in repayment of a Credit Provider Reimbursement Obligation), and expenses incurred or accrued incident to the formation of an entity to which the City may transfer substantially all of the Metropolitan System pursuant to the Installment Purchase Agreement, but excluding in all cases (i) depreciation, replacement and obsolescence charges or reserves therefor; (ii) amortization of intangibles or other bookkeeping entries of a similar nature; (iii) costs of capital additions, replacements, betterment, extensions or improvements to the Wastewater System, which under generally accepted accounting principles are chargeable to a capital account or to a reserve for depreciation; (iv) charges for the

payment of principal and interest on any general obligation bond heretofore or hereafter issued for Wastewater System purposes; and (v) charges for the payment of principal and interest on account of any debt service on account of any obligation on a parity with or subordinate to the Installment Payments.

**"Maximum Annual Debt Service"** means at any point in time, with respect to Parity Obligations then Outstanding, the maximum amount of principal and interest becoming due on the Parity Obligations in the then current or any future Fiscal Year, calculated by the City or by an Independent Certified Public Accountant as provided in this definition and provided to the Trustee. For purposes of calculating Maximum Annual Debt Service, the following assumptions shall be used to calculate the principal and interest becoming due in any Fiscal Year:

(i) in determining the principal amount due in each year, payments shall (except to the extent a different subsection of this definition applies for purposes of determining principal maturities or amortization) be assumed to be made in accordance with any amortization schedule established for such debt, including the amount of any Parity Obligations which are or have the characteristics of commercial paper and which are not intended at the time of issuance to be retired from the sale of a corresponding amount of Parity Obligations, and including any scheduled mandatory redemption or prepayment of Parity Obligations on the basis of accreted value due upon such redemption or prepayment, and for such purpose, the redemption payment or prepayment shall be deemed a principal payment; in determining the interest due in each year, interest payable at a fixed rate shall (except to the extent subsection (ii) or (iii) of this definition applies) be assumed to be made at such fixed rate and on the required payment dates;

(ii) if all or any portion or portions of an Outstanding Series of Parity Obligations constitutes Balloon Indebtedness or if all or any portion or portions of a Series of Parity Obligations or such payments then proposed to be issued would constitute Balloon Indebtedness, then, for purposes of determining Maximum Annual Debt Service, each maturity which constitutes Balloon Indebtedness shall be treated as if it were to be amortized in substantially equal annual installments of principal and interest over a term of 25 years commencing in the year the stated maturity of such Balloon Indebtedness occurs, the interest rate used for such computation shall be determined as provided in (iv) or (v) below, as appropriate, and all payments of principal and interest becoming due prior to the year of the stated maturity of the Balloon Indebtedness shall be treated as described in (i) above;

(iii) if any of the Outstanding Series of Parity Obligations constitutes Tender Indebtedness or if Parity Obligations proposed to be issued would constitute Tender Indebtedness, then for purposes of determining Maximum Annual Debt Service, Tender Indebtedness shall be treated as if the principal amount of such Parity Obligations were to be amortized in accordance with the amortization schedule set forth in such Tender Indebtedness or in the standby purchase or liquidity facility established with respect to such Tender Indebtedness, or if no such amortization schedule is set forth, then such Tender Indebtedness shall be deemed to be amortized in substantially equal annual installments of principal and interest over a term of 25 years commencing in the year in which such Series first subject to tender, the interest rate used for such computation shall be determined as provided in (iv) or (v) below, as appropriate;

(iv) if any Outstanding Parity Obligations constitute Variable Rate Indebtedness (except to the extent paragraph (ii) relating to Balloon Indebtedness or paragraph (iii) relating to Tender Indebtedness applies), the interest rate on such Obligation shall be assumed to be 110% of the daily average interest rate on such Parity Obligations during the 12 months ending with the month preceding the date of calculation, or such shorter period that such Parity Obligations shall have been Outstanding; provided that in the event that such Variable Rate Indebtedness has been issued in connection with a Qualified Swap Agreement, the interest rate for purposes of computing Maximum Annual Debt Service shall be determined by (x) calculating the annualized net amount paid by the City under such Variable Rate Indebtedness and Qualified Swap Agreement (after giving effect to payments made under the Variable Rate Indebtedness and made and received by the City under the Qualified Swap Agreement) during the 12 months ending with the month preceding the date of calculation, or such shorter period that such Qualified Swap Agreement has been in effect, and (y) dividing the amount calculated in clause (x) by the average daily balance of the related Parity Obligations Outstanding during the 12-month period contemplated by clause (x);

(v) if Parity Obligations proposed to be issued will be Variable Rate Indebtedness (except to the extent subsection (ii) relating to Balloon Indebtedness or (iii) relating to Tender Indebtedness applies), then such Parity Obligations shall be assumed to bear interest at 110% of the average of the J.J. Kenny High Grade Index during the prior 12 months ending with the month preceding the date of sale of such additional Parity Obligations, or if that index is no longer published, another similar index selected by the City, or if the City fails to select a replacement index, an interest rate equal to 80% of the yield for outstanding United States Treasury bonds having an equivalent maturity, or if there are no such Treasury bonds having such maturities, 100% of the lowest prevailing prime rate of any of the five largest commercial banks in the United States ranked by assets; provided that in the event that such Variable Rate Indebtedness will be issued in connection with a Qualified Swap Agreement, the interest rate for purposes of computing Maximum Annual Debt Service shall be determined by (a) calculating the net amount to be paid by the City under such Variable Rate Indebtedness and Qualified Swap Agreement after giving effect to payments to be made under the Variable Rate Indebtedness and to be made and received by the City under the Qualified Swap Agreement) for the period during which the Qualified Swap Agreement is to be in effect and for this purpose any variable rate of interest agreed to be paid thereunder shall be deemed to be the rate at which the related Parity Obligation shall be assumed to bear interest, and (b) dividing the amount calculated in clause (a) by the average principal amount of the related Parity Obligation to be Outstanding during the first year after the issuance of such Parity Obligation;

(vi) if moneys or Permitted Investments have been deposited by the City into a separate fund or account or are otherwise held by the City or by a fiduciary to be used to pay principal and/or interest on specified Parity Obligations, then the principal and/or interest to be paid from such moneys, Permitted Investments or from the earnings thereon shall be disregarded and not included in calculating Maximum Annual Debt Service;

(vii) if Parity Obligations are Paired Obligations, the interest thereon shall be the resulting linked rate or effective fixed rate to be paid with respect to such Paired Obligations; and

(viii) in the event that an agreement or commitment which, at the time of calculation is a Qualified Swap Agreement is or is to be in effect with respect to a Parity Obligation which is not Variable Rate Indebtedness, the interest rate of such Parity Obligation for purposes of calculating Maximum Annual Debt Service shall be calculated as follows:

(a) for such a Qualified Swap Agreement which is in effect on the date of calculation, the interest rate shall be calculated in the same manner as is specified in paragraph (iv) for a Qualified Swap Agreement issued in connection with Variable Rate Indebtedness which is Outstanding on the date of calculation; and

(b) for such a Qualified Swap Agreement which is not in effect on the date of calculation, the interest rate shall be calculated in the same manner as is specified in paragraph (v) for a Qualified Swap Agreement to be issued in connection with Variable Rate Indebtedness to be Outstanding after the date of calculation, and for this purpose any variable rate of interest agreed to be paid thereunder shall be assumed to be the rate assumed for Variable Rate Indebtedness described in paragraph (v).

"Maximum Rate" means, on any day, the maximum interest rate allowed by law.

"Metropolitan System" means any and all facilities, properties and improvements designated by the City in its sole discretion as part of the Metropolitan System, and used for the conveyance from the Municipal System and treatment of sewage collected by the City through its Municipal System or by any of the Participating Agencies.

**"Metropolitan System Revenues"** means all income, rents, rates, fees, charges and other moneys derived from the ownership or operation of the Metropolitan System, including, without limiting the generality of the foregoing, (i) all income, rents, rates, fees, charges (including standby and capacity charges), or other moneys derived by the City from the wastewater services, facilities, and commodities or byproducts sold, furnished or supplied through the facilities of or in the conduct or operation of the business of the Metropolitan System, and including, without limitation, investment earnings on the operating reserves to the extent that the use of such earnings is limited to the Metropolitan System by or pursuant to law, earnings on any Reserve Fund for Obligations the proceeds of which were used to finance improvements which are part of the Metropolitan System, or to fund or refund any such Obligations, but only to the extent that such earnings may be utilized under the Issuing Instrument for the payment of debt service for such Obligations; (ii) the proceeds derived by the City directly or indirectly from the sale, lease or other disposition of a part of the Metropolitan System; (iii) any amount received from the levy or collection of taxes which are solely available and are earmarked for the support of the operation of the Metropolitan System; and (iv) amounts received under contracts or agreements with governmental or private entities and designated for capital costs for Components which are to be part of the Metropolitan System; and (v) grants received from the United States of America or from the State for Components which are to be part of the Metropolitan System; provided, however, that Metropolitan System Revenues shall not include: (a) in all cases, customers' deposits or any other deposits or advances subject to refund until such deposits or advances have become the property of the City; and (b) the proceeds of borrowings. Notwithstanding the foregoing, there shall be deducted from Metropolitan System Revenues any amounts transferred into a Rate Stabilization Fund as contemplated by the Installment Purchase Agreement, and there shall be added to Metropolitan System Revenues any amounts transferred out of such Rate Stabilization Fund to pay Maintenance and Operation Costs of the Metropolitan System.

**"Moody's"** means Moody's Investors Service, Inc., a Delaware corporation, and its successors, and if such corporation shall for any reason no longer perform the functions of a securities rating agency, "Moody's" shall be deemed to refer to any other nationally recognized securities rating agency designated by the Authority and the City.

**"Municipal System"** means any and all facilities, properties and improvements at any time owned, controlled or operated by the City, and designated by the City in its sole discretion as part of the Municipal System, for the collection of sewage from the points of origination thereof and the conveyance thereof to the Metropolitan System.

**"Municipal System Revenues"** means all income, rents, rates, fees, charges and other moneys derived from the ownership or operation of the Municipal System, including, without limiting the generality of the foregoing, (i) all income, rents, rates, fees, charges (including standby and capacity charges), or other moneys derived by the City from the wastewater services, facilities, and commodities or byproducts sold, furnished or supplied through the facilities of or in the conduct or operation of the business of the Municipal System, and including, without limitation, investment earnings on the operating reserves to the extent that the use of such earnings is limited to the Municipal System by or pursuant to law, earnings on any Reserve Fund for Obligations the proceeds of which were used to finance improvements which are part of the Municipal System, or to fund or refund any such Obligations, but only to the extent that such earnings may be utilized under the Issuing Instrument for debt service for such Obligations; (ii) the proceeds derived by the City directly or indirectly from the sale, lease or other disposition of a part of the Municipal System; (iii) any amount received from the levy or collection of taxes which are solely available and are earmarked for the support of the operation of the Municipal System; (iv) amounts received under contracts or agreements with governmental or private entities and designated for capital costs for Components which are to be part of the Municipal System; and (v) grants received from the United States of America or from the State for Components which are to be part of the Municipal System: provided, however, that Municipal System Revenues shall not include: (i) in all cases, customers' deposits or any other deposits or advances subject to refund until such deposits or advances have become the property of the City; and (ii) the proceeds of borrowings. Notwithstanding the foregoing, there shall be deducted from Municipal System Revenues any amounts transferred into a Rate Stabilization Fund as contemplated by the Installment Purchase Agreement and there shall be added to Municipal System Revenues any amounts transferred out of such Rate Stabilization Fund to pay Maintenance and Operation Costs of the Municipal System.

**"National Repository"** means any Nationally Recognized Municipal Securities Information Repository for purposes of the Rule.

**"Net Proceeds"** means when used with respect to any insurance, self insurance or condemnation award, the proceeds from such award remaining after payment of all expenses (including attorneys' fees) incurred in the collection of such proceeds.

**"Net Metropolitan System Revenues"** means for any Fiscal Year, the Metropolitan System Revenues for such Fiscal Year less the Maintenance and Operation Costs of the Metropolitan System for such Fiscal Year.

**"Net Municipal System Revenues"** means for any Fiscal Year, the Municipal System Revenues for such Fiscal Year less the Maintenance and Operation Costs of the Municipal System for such Fiscal Year.

**"Net System Revenues"** means for any Fiscal Year, the System Revenues for such Fiscal Year less the Maintenance and Operation Costs of the Wastewater System for such Fiscal Year.

**"1993 Bonds"** means the Public Facilities Financing Authority of the City of San Diego Sewer Revenue Bonds, Series 1993 (Payable Solely from Installment Payments Secured by Wastewater System Net Revenues), authorized, executed, issued and delivered and at any time Outstanding pursuant to the Indenture, and any Bonds issued upon transfer thereof or in exchange therefor or in lieu thereof in accordance with the provisions of the Indenture.

**"1993-1 Supplement"** means the 1993-1 Supplement dated as of September 1, 1993, by and between the City and the Authority, supplementing and amending the Installment Purchase Agreement.

**"1995 Bonds"** means the Public Facilities Financing Authority of the City of San Diego Sewer Revenue Bonds, Series 1995 (Payable Solely from Installment Payments Secured by Wastewater System Net Revenues), authorized, executed, issued and delivered and at any time Outstanding pursuant to the Indenture, and any Bonds issued upon transfer thereof or in exchange therefor or in lieu thereof in accordance with the provisions of the Indenture.

**"1995-1 Supplement"** means the 1995-1 Supplement dated as of December 1, 1995, by and between the City and the Authority, supplementing and amending the Installment Purchase Agreement.

**"Obligations"** means (i) obligations of the City for money borrowed (such as bonds, notes or other evidences of indebtedness) or as installment purchase payments under any contract (including Installment Payments), or as lease payments under any financing lease (determined to be such in accordance with generally accepted accounting principles), the principal and interest on which are payable from Net System Revenues; (ii) obligations to replenish any debt service reserve funds with respect to such obligations of the City; (iii) obligations secured by or payable from any of such obligations of the City; and (iv) obligations of the City payable from Net System Revenues under (a) any contract providing for payments based on levels of, or changes in, interest rates, currency exchange rates, stock or other indices, (b) any contract to exchange cash flows or a series of payments or (c) any contract to hedge payment, currency, rate spread or similar exposure, including but not limited to interest rate swap agreements and interest rate cap agreements.

**"Opinion of Bond Counsel"** means a written opinion of counsel of recognized national standing in the field of law relating to municipal bonds, appointed and paid by the Authority and satisfactory to the Trustee.

**"Original Indenture"** means the Indenture, dated as of September 1, 1993, between the Authority and the Trustee.

**"Outstanding"** when used as of any particular time with reference to Bonds, means (other than Bonds owned or held by or for the account of the Authority or the City) all Bonds theretofore or thereupon executed by the Authority and authenticated and delivered by the Trustee pursuant to the Indenture, except: (i) Bonds theretofore cancelled by the Trustee or surrendered to the Trustee for cancellation; (ii) Bonds paid or deemed to have been paid

within the meaning of the Indenture; (iii) Bonds beneficially owned by the City or the Authority; and (iv) Bonds in lieu of or in substitution for which other Bonds shall have been executed by the Authority and authenticated and delivered pursuant to the Indenture; and the term "Outstanding," when used as of any particular time with respect to Obligations, means all Obligations theretofore or thereupon executed, authenticated and delivered by the City or any trustee or other fiduciary, except (i) Obligations theretofore cancelled or surrendered for cancellation; (ii) Obligations paid or deemed to be paid within the meaning of any defeasance provisions thereof; (iii) Obligations owned by the City or the Authority; (iv) Obligations in lieu of or in substitution for which other Obligations have been executed and delivered; and (v) Obligations assumed by the District or other successor in accordance with the Installment Purchase Agreement.

**"Owner"** means any person who shall be the registered owner of any Outstanding Bond, as shown on the registration books required to be maintained by the Trustee pursuant to the Indenture, and the term "Owner," when used with respect to Obligations means any person who will be the registered owner of any outstanding Obligation certificate or other evidence of a right to receive Installment Payments directly or as security for payment of the Obligation.

**"Paired Obligations"** means any Series (or portion thereof) of Parity Obligations designated as Paired Obligations in a Supplement or related Issuing Instrument or other document authorizing the issuance or incurrence thereof, which are simultaneously issued or incurred (i) the principal of which is of equal amount maturing and to be redeemed (or cancelled after acquisition thereof) on the same dates and in the same amounts; and (ii) the interest rates which, taken together, result in an irrevocably fixed interest rate obligation of the City for the terms of such Parity Obligations.

**"Parity Installment Obligation"** means Obligations consisting of or payable from Installment Payments which are not subordinated in right of payment to other Installment Payments.

**"Parity Obligations"** means, (i) Parity Installment Obligations, (ii) Obligations the principal and interest of which are payable on a parity with Parity Installment Obligations, (iii) Qualified Take or Pay Obligations and (iv) Qualified Swap Agreements. Notwithstanding the foregoing, any amounts payable with respect to a Qualified Swap Agreement which represent termination payments or unwinding payments will not be deemed to be Parity Obligations unless (i) such Qualified Swap Agreement expressly states that such termination payments or unwinding payments are to be considered Parity Obligations and (ii) each Rating Agency which maintains a rating with respect to any Parity Obligation confirms in writing to the City that the inclusion of such termination payments or unwinding payments as Parity Obligations will not result in a downgrading, withdrawal or suspension of such rating.

**"Participating Agencies"** means the cities and other agencies providing local sewage collection services within their respective areas and which (i) have entered into contracts with the City pursuant to which the City is providing sewage collection, transportation, treatment or disposal services or (ii) are having such services provided by the District or other successor to the City to which the Metropolitan System has been transferred pursuant to the Installment Purchase Agreement.

**"Participating Underwriter"** means any of the original underwriters of the 1995 Bonds required to comply with the Rule in connection with offering of the 1995 Bonds.

**"Payment Fund"** means the fund designated in the Issuing Instrument as the fund into which Installment Payments are to be deposited for the purposes of paying principal or interest on related Obligations.

**"Permitted Investments"** means any of the following to the extent then permitted by law and the Indenture:

(i) direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America, including obligations issued or held in book entry form on the books of the Department of the Treasury of the United States and including a receipt, certificate or any other evidence of an ownership interest in an aforementioned obligation, or in specified portions thereof (which may consist of specified portions of interest thereon);

(ii) (a) obligations issued by the Federal Farm Credit Bank, Federal Home Loan Bank Board, Federal Home Loan Mortgage Corporation, Student Loan Marketing Association or the Tennessee Valley Authority, or (b) obligations, participations or other instruments of or issued by, or fully guaranteed as to interest and principal by, the Federal National Mortgage Association (excluding stripped mortgage backed securities which are valued at greater than par on the unpaid principal), or (c) guaranteed portions of Small Business Administration notes, or (d) obligations, participations or other instruments of or issued by a federal agency or a United States of America government-sponsored enterprise; provided, however, that prior to investing in investments described in clause (d) hereof, the City will have provided to the Trustee evidence that such investment is then rated not lower than A by Moody's and S&P;

(iii) obligations of any state, territory or commonwealth of the United States of America or any political subdivision thereof or any agency or department of the foregoing; provided, that at the time of their purchase such obligations are rated not lower than A by Moody's and S&P;

(iv) bonds, notes, debentures or other evidences of indebtedness issued or guaranteed by any corporation which are, at the time of purchase, rated by Moody's and S&P in their respective highest short-term rating categories, or, if the term of such indebtedness is longer than three years, rated not lower than A by Moody's and S&P;

(v) taxable commercial paper or tax-exempt commercial paper rated in their respective highest rating categories by Moody's and S&P;

(vi) variable rate obligations required to be redeemed or purchased by the obligor or its agent or designee upon demand of the holder thereof secured as to such redemption or purchase requirements by a liquidity agreement with a corporation and as to the payment of interest and principal either upon maturity or redemption (other than upon demand by the holder thereof) thereof by an unconditional credit facility of a corporation; provided, that the variable rate obligations themselves are rated in their respective highest rating categories for its short-term rating, if any, and not lower than A for its long-term rating, if any, by Moody's and S&P, and that the corporations providing the liquidity agreement and credit facility have, at the date of acquisition of the variable rate obligation by the Trustee, an outstanding issue of unsecured, uninsured and unguaranteed debt obligations rated not lower than A by Moody's and S&P;

(vii) deposits accounts or certificates of deposit, whether negotiable or non-negotiable, issued by a state or national bank (including the Trustee) or a state or federal savings and loan association, provided that such certificates of deposit shall be either (A) continuously and fully insured by the Federal Deposit Insurance Corporation or (B) have maturities of not more than 365 days (including certificates of deposit) and are issued by any state or national bank or a state or federal savings and loan association, the short term obligations of which are rated in the highest short term letter and numerical rating category by Moody's and S&P;

(viii) bills of exchange or time drafts drawn on and accepted by a commercial bank, otherwise known as bankers acceptances, which bank has short-term obligations outstanding which are rated by Moody's and S&P in their respective highest short-term rating categories, and which bankers acceptances mature not later than 270 days from the date of purchase;

(ix) any repurchase agreement with any bank or trust company organized under the laws of any state of the United States or any national banking association (including the Trustee) having a minimum permanent capital of one hundred million dollars (\$100,000,000) and with short-term debt rated by Moody's and S&P in their respective three highest short-term rating categories or any government bond dealer reporting to, trading with, and recognized as a primary dealer by, the Federal Reserve Bank of New York, which agreement is secured by any one or more of the securities and obligations described in clauses (i) or (ii) above, which shall have a market value (exclusive of accrued interest and valued at least monthly) at least equal to the principal amount of such investment and shall be lodged with the Trustee or other fiduciary, as custodian for the Trustee, by the bank, trust company, national banking association or bond dealer executing such repurchase agreement, and the entity executing each such repurchase agreement



required to be so secured shall furnish the Trustee with an undertaking satisfactory to it that the aggregate market value of all such obligations securing each such repurchase agreement (as valued at least monthly) will be an amount equal to the principal amount of such repurchase agreement and Trustee shall be entitled to rely on each such undertaking;

(x) any cash sweep or similar account arrangement of or available to the Trustee, the investments of which are limited to investments described in clauses (i), (ii), (iii) and (ix) of this definition and any money market fund, the entire investments of which are limited to investments described in clauses (i), (ii), (iii) and (ix) of this definition and which money market fund is rated in their respective highest rating categories by Moody's and S&P;

(xi) any guaranteed investment contract approved in writing by AMBAC Indemnity with a financial institution or insurance company which has at the date of execution thereof an outstanding issue of unsecured, uninsured and unguaranteed debt obligations or a claims paying ability rated not lower than Aa/AA by Moody's and S&P;

(xii) certificates, notes, warrants, bonds or other evidence of indebtedness of the State of California or of any political subdivision or public agency thereof which are rated in the highest short-term rating category or within one of the three highest long term rating categories of Moody's and S&P (excluding securities that do not have a fixed par value and/or whose terms do not promise a fixed dollar amount at maturity or call date);

(xiii) for amounts less than \$10,000, interest-bearing demand or time deposits (including certificates of deposit) in a nationally or state-chartered bank, or state or federal savings and loan association in the State, fully insured by the Federal Deposit Insurance Corporation, including the Trustee or any affiliate thereof;

(xiv) investments in taxable money market funds or portfolios restricted to obligations maturing in one year or less and which funds or portfolios are rated in either of the two highest rating categories by Moody's and S&P, or have or are portfolios guaranteed as to payment of principal and interest by full faith and credit of the United States of America;

(xv) any obligations which are then legal investments for moneys of the Authority under the laws of the State; provided, that if such investments are not required to be collateralized or insured such investments shall be issued by entities the debt securities of which are rated in one of the two highest short-term or long-term rating categories by Moody's and S&P; provided further, that any repurchase agreements must be fully secured by collateral security described in clauses (i) and (ii) of this definition, which collateral (a) is held by the Trustee or a third party agent during the term of such repurchase agreement and in which collateral the Trustee has a perfected first security interest, (b) has a market value determined at least every thirty days at least equal to 103% of the amount so invested and (c) may be liquidated within seven days if the market value of such collateral is at any time less than the amount so invested;

(xvi) investments in the Local Agency Investment Fund created pursuant to Section 16429.1 of the California Government Code;

(xvii) shares of beneficial interest in diversified management companies investing exclusively in securities and obligations described in clauses (i) through (xvi) of this definition and which companies are rated in their respective highest rating categories by Moody's and S&P or have an investment advisor registered with the Commission with not less than five years' experience investing in such securities and obligations and with assets under management in excess of five hundred million dollars (\$500,000,000);

(xviii) for amounts held in the Acquisition Fund only, any interest rate swap agreement with a counterparty which has at the date of execution thereof an unsecured, uninsured and nonguaranteed long-term obligation rated not lower than A by Moody's and S&P; provided, that such counterparty may satisfy such rating requirements by providing an insurance policy for its obligations under any such swap

agreement from an insurer whose unsecured ratings are in the rating categories required above, or alternatively by providing an unconditional, irrevocable, unsecured, uninsured and nonguaranteed guaranty of any other entity, including an affiliated entity, whose unsecured ratings are in the rating categories required above; and

(xix) any other obligations which are approved in writing by Moody's (if Moody's is then rating the Bonds), S&P (if S&P is then rating the Bonds) and AMBAC Indemnity.

**"Pre-Refunded Municipals"** means any bonds or other obligations of any state of the United States of America or of any other agency, instrumentality or local government unit of any such state which are not callable at the option of the obligor prior to maturity or as to which irrevocable instructions have been given by the obligor to call on the date specified in the notice; and which are rated, based on the escrow, in the highest rating category of Moody's and S&P.

**"Principal Portion"** means the principal portion of Component Installment Payments.

**"Prior Indenture"** means the Indenture, dated as of September 1, 1993, between the Authority and the Trustee, as supplemented by the First Supplemented Indenture, dated as of May 1, 1994, between the Authority and the Trustee.

**"Project"** means the construction, replacement and improvements to the Wastewater System described in an exhibit attached to the Installment Purchase Agreement and as modified with respect to Components in conformance with the Installment Purchase Agreement.

**"Purchase Price"** means the principal amount plus interest thereon owed by the City to the Authority under the terms of and as provided in the Installment Purchase Agreement.

**"Qualified Swap Agreement"** means a contract or agreement, payable from Net System Revenues on a parity with Parity Obligations, intended to place Obligations on the interest rate, currency, cash flow or other basis desired by the City, including, without limitation, any interest rate swap agreement, currency swap agreement, forward payment conversion agreement or futures contract, any contract providing for payments based on levels of, or changes in, interest rates, currency exchange rates, stock or other indices, any contract to exchange cash flows or a series of payments, or any contract, including, without limitation, an interest rate floor or cap, or an option, put or call, to hedge payment, currency, rate, spread or similar exposure, between the City and the counterparty; provided that not less than 30 days prior to the City's execution of such contract or agreement, each Rating Agency which maintains a rating with respect to any Parity Obligation receives notice in writing of the City's pending execution thereof; provided further that at the time of origination each Rating Agency which maintains a rating with respect to any Parity Obligation confirms in writing to the City that the City's execution and delivery of such contract will not result in a downgrading, withdrawal or suspension of such rating; and provided further, that the following requirements shall also be applicable, to the extent they are more restrictive than the foregoing conditions and so long as the Bond Insurer is insuring the payment of principal of and interest on any 1995 Bonds:

1. The provider of such contract or agreement must be rated at least A-/A3 or better by S&P and Moody's (the "Initial Rating Requirement").
2. After satisfaction of the Initial Rating Requirement, the long term indebtedness of such provider or the claims paying ability of such provider shall not fall below Baa2 or BBB by either S&P or Moody's.

**"Qualified Take or Pay Obligation"** means the obligation of the City to make use of any facility, property or services, or some portion of the capacity thereof, or to pay therefor from System Revenues, or both, whether or not such facilities, properties or services are ever made available to the City for use, and there is provided to the City a certificate of an Independent Engineer to the effect that the incurrence of such obligation will not adversely affect the ability of the City to comply with the provisions of the Installment Purchase Agreement.

**"Rating Agencies"** means Moody's and S&P, or whichever of them is rating Parity Obligations.

**"Rebate Requirement"** shall have the meaning specified in any Tax Certificate.

**"Record Date"** means the fifteenth day preceding an Interest Payment Date, whether or not such day is a Business Day.

**"Repository"** means each National Repository and the State Repository.

**"Reserve Requirement"** means, as of any date of calculation, the least of (i) 10% of the proceeds of the Bonds, (ii) Maximum Annual Debt Service for the current or any future Fiscal Year or (iii) 125% of average Annual Debt Service. For purposes of determining if the amount on deposit in the Reserve Fund equals the Reserve Requirement, any Credit Facility shall be deemed to be a deposit in the face amount or stated amount of such Credit Facility, less any unreimbursed drawings or other amounts not reinstated under such Credit Facility.

**"Revenues"** means all Installment Payments pursuant to the Installment Purchase Agreement and the interest or profits from the investment of money in any account or fund (other than the Rebate Fund) pursuant to the Indenture.

**"Rule"** means Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

**"S&P"** means Standard & Poor's Corporation, a New York corporation, and its successors, and if such corporation shall for any reason no longer perform the functions of a securities rating agency, "S&P" shall be deemed to refer to any other nationally recognized securities rating agency designated by the Authority and the City.

**"Second Supplemental Indenture"** means the Second Supplemental Indenture, dated as of December 1, 1995, between the Authority and the Trustee, supplementing and amending the Prior Indenture.

**"Serial Bonds"** means Bonds for which no sinking fund payments are provided.

**"Serial Parity Obligations"** means Serial Obligations which are Installment Payments or are payable on a parity with Parity Installment Obligations.

**"Serial Obligations"** means Obligations for which no sinking fund payments are provided.

**"Series"** means Obligations issued at the same time or sharing some other common term or characteristic and designated as a separate Series.

**"Sewer Revenue Fund"** means the fund established pursuant to the Ordinances of the City Council of the City and which fund the City agrees and covenants to maintain so long as any Installment Payments or payments due by the City under any Qualified Swap Agreement remain unpaid, and all moneys in such fund shall be held in trust and applied and used solely as provided in the Installment Purchase Agreement.

**"State"** means the State of California.

**"State Repository"** means any public or private repository or entity designated by the State as the state repository for the purpose of the Rule and recognized as such by the Securities and Exchange Commission.

**"Subordinated Obligations"** means any Obligations, the payment of principal and interest on which are subordinated in right of payment to Parity Obligations.

**"Supplement"** means a Supplement, substantially in the form of an exhibit attached to the Installment Purchase Agreement, providing for the payment of specific Installment Payments as the Purchase Price for Components of the Project, executed and delivered by the City and the Authority.

**"Supplemental Indenture"** means any indenture then in full force and effect which has been duly executed and delivered by the Authority and the Trustee amendatory of the Indenture or supplemental thereto; but only if, and to the extent that, such Supplemental Indenture is specifically authorized under the Indenture.

**"System Revenues"** means all income, rents, rates, fees, charges and other moneys derived from the ownership or operation of the Wastewater System, including, without limiting the generality of the foregoing, (i) all income, rents, rates, fees, charges (including standby capacity charges), or other moneys derived by the City from wastewater services, facilities, and commodities or byproducts sold, furnished or supplied through the facilities of or in the conduct or operation of the business of the Wastewater System, but including, without limitation, investment earnings on the operating reserves to the extent that the use of such earnings is limited to the Wastewater System by or pursuant to law, earnings on any Reserve Fund for Obligations but only to the extent that such earnings may be utilized under the Issuing Instrument for the payment of debt service for such Obligations; (ii) the proceeds derived by the City directly or indirectly from the lease of a part of the Wastewater System; (iii) any amount received from the levy or collection of taxes which are solely available and are earmarked for the support of the operation of the Wastewater System; (iv) amounts received under contracts or agreements with governmental or private entities and designated for capital costs; and (v) grants received from the United States of America or from the State of California; provided, however, that System Revenues shall not include: (a) in all cases, customers' deposits or any other deposits or advances subject to refund until such deposits or advances have become the property of the City; and (b) the proceeds of borrowings. Notwithstanding the foregoing, there will be deducted from System Revenues any amounts transferred into a Rate Stabilization Fund as contemplated by the Installment Purchase Agreement, and there will be added to System Revenues any amounts transferred out of such Rate Stabilization Fund to pay Maintenance and Operation Costs of the Wastewater System.

**"Tax Certificate"** means the certificate delivered with respect to the Bonds on which it is intended that interest thereon will be excluded from gross income pursuant to Section 103 of the Code.

**"Tax-Exempt Installment Payment Obligations"** means Installment Payment Obligations in respect of which it is intended that the interest component thereof will be excluded from gross income pursuant to Section 103 of the Code.

**"Tender Indebtedness"** means any Parity Obligations or portions of Parity Obligations, a feature of which is an option, on the part of the holders thereof, or an obligation, under the terms of such Parity Obligations, to tender all or a portion of such Parity Obligations to the City, a Paying Agent or other fiduciary or agent for payment or purchase and requiring that such Bonds or portions of Bonds or that such rights to payments or portions of payments be purchased if properly presented.

**"Term Bonds"** means Bonds which are payable on or before their specified maturity dates from sinking fund payments established for that purpose and calculated to retire such Bonds on or before their specified maturity dates.

**"Term Parity Obligations"** means Term Obligations which are Parity Obligations or are payable on a parity with Parity Installment Obligations.

**"Term Obligations"** means Obligations which are payable on or before their specified maturity dates from sinking fund payments established for that purpose and calculated to retire such Obligations on or before their specified maturity dates.

**"Treasurer"** means the Treasurer of the City.

**"Trustee"** means State Street Bank and Trust of California, N.A., a national banking association existing under and by virtue of the laws of the United States, or any other association or corporation which may at any time be substituted in its place as provided in the Indenture.

**"Variable Rate Indebtedness"** means any portion of indebtedness evidenced by Parity Obligations the interest rate on which is not established at the time of incurrence of such indebtedness and has not, at some

subsequent date, been established at a rate which is not subject to fluctuation or subsequent adjustment, excluding Paired Obligations.

**"Wastewater Service"** means the wastewater collection and treatment services made available or provided by the Wastewater System.

**"Wastewater System"** means any and all facilities, properties and improvements at any time owned, controlled or operated by the City as part of the Sewer Revenue Fund (defined in the Installment Purchase Agreement) for the collection, treatment, distribution, administration, disposal or reclamation of waste, including the Municipal System and the Metropolitan System. After any transfer of the Metropolitan System permitted by the Installment Purchase Agreement, the term "Wastewater System" shall mean the Municipal System with respect to the City and the Metropolitan System with respect to the transferee.

**"Written Request of the Authority"** means an instrument in writing signed by the President, the Vice President, the Secretary or the Assistant Secretary of the Authority, or by any other officer of the Authority duly authorized by the Authority for that purpose.

**"Written Request of the City"** means an instrument in writing signed by the City Manager or the Financial Management Director, or by any other official of the applicable administrative departments of the City duly authorized by the City for that purpose.

## **APPENDIX E**

### **SUMMARY OF PRINCIPAL LEGAL DOCUMENTS**

## APPENDIX E

### SUMMARY OF PRINCIPAL LEGAL DOCUMENTS

The following are brief summaries of certain provisions of the Indenture, the Installment Purchase Agreement and the Continuing Disclosure Agreement. These summaries do not purport to be full and complete statement of the provisions of such documents and are qualified in their entirety by reference to the complete text of such documents. Prior to delivery of the 1995 Bonds, copies of these documents are available from the City and after delivery of the 1995 Bonds, from the Trustee.

#### THE INDENTURE

##### General

The Indenture sets forth the terms of the Bonds, the nature and extent of the security for the Bonds, various rights of the Owners of the Bonds, rights, duties and immunities of the Trustee and the rights and obligations of the Authority. Certain provisions of the Indenture are summarized below. Other provisions are summarized in this Official Statement under the caption "DESCRIPTION OF THE SERIES 1995 BONDS." This summary does not purport to be complete or definitive and is qualified in its entirety by reference to the full terms of the Indenture.

In consideration of the acceptance of the Bonds by the Owners thereof, the Indenture will be deemed to be and will constitute a contract between the Authority and the Trustee for the benefit of the Owners from time to time of all Bonds authorized, executed, issued and delivered under the Indenture and then Outstanding to secure the full and final payment of the interest on and principal of and redemption premiums, if any, on all Bonds which may from time to time be authorized, executed, issued and delivered under the Indenture, subject to the agreements, conditions, covenants and provisions contained in the Indenture and all agreements and covenants set forth in the Indenture to be performed by or on behalf of the Authority will be for the equal and proportionate benefit, protection and security of all Owners of the Bonds without distinction, preference or priority as to security or otherwise of any Bonds over any other Bonds by reason of the number or date thereof or the time of authorization, sale, whatsoever, except as expressly provided in the Indenture or therein.

Establishment of Funds and Accounts. The Authority will establish and maintain the Acquisition Fund to be held by the Treasurer and disbursed by the Auditor and Comptroller in accordance with the Indenture. The Indenture establishes the Payment Fund and the Reserve Fund. Within the Payment Fund, the Trustee will establish and maintain an Interest Account, a Principal Account, a Bond Sinking Account and a Redemption Account. Each of the funds and accounts established in the Indenture will be maintained by the Trustee separate and apart from all other moneys of the Authority held by it, for the benefit of the Authority, the City and the Owners of the Bonds and will be expended solely as provided in the Indenture.

Application of the Acquisition Fund. The Treasurer will hold the moneys in the Acquisition Fund and the Auditor and Comptroller will disburse such moneys to pay Acquisition Costs and to pay Costs of Issuance. Such disbursements will be made from time to time upon receipt of a Written Request of the City on behalf of the Authority which states with respect to each disbursement to be made: (a) (1) the requisition number, (2) the name and address of the person, firm or corporation to whom payment is due, (3) the amount to be disbursed, and (4) that each obligation therein has been properly incurred, and is a proper charge against the Acquisition Fund and has not been the basis of any previous disbursement; (b) specifies in reasonable detail the nature of the obligation; and (c) is accompanied by a bill or statement of account for each obligation.

If, after payment by the Auditor and Comptroller of all Written Requests of the City on behalf of the Authority tendered under the provisions of the Indenture, and delivery to the Treasurer, the Auditor and Comptroller and the Trustee of a Certificate of Completion, there remains any balance of money in the Acquisition Fund, all money so remaining will be transferred to the Trustee and deposited, first to the Reserve Fund to the extent necessary to make the amount on deposit therein equal to the Reserve Requirement, and thereafter to the accounts of the Payment Fund as directed by the Authority.

**Pledge of Revenues.** Subject only to the provisions of the Indenture permitting the application thereof for the purpose and on the terms and conditions set forth therein, while any Bonds remain Outstanding, all Revenues and amounts on deposit in the funds and accounts established under the Indenture (other than amounts on deposit in the Rebate Fund) are irrevocably pledged to the payment of the interest on and principal of the Bonds.

Pursuant to the Indenture, the Authority transfers, conveys and assigns to the Trustee, for the benefit of the Owners, all of the Authority's rights under the Installment Purchase Agreement (excepting certain indemnification rights thereunder), including the right to receive Installment Payments from the City, the right to receive any proceeds of insurance maintained under the Installment Purchase Agreement or any condemnation award rendered with respect to the Project and the right to exercise any remedies provided in the Installment Purchase Agreement in the event of default by the City under the Installment Purchase Agreement.

The Trustee will be entitled to and will receive all of the Revenues, and any Revenues collected or received by the Authority will be deemed held, collected or received by the Authority as agent of the Trustee and will forthwith be paid by the Authority to the Trustee.

**Application of the Payment Fund.** Subject to the provisions of the Indenture relating to the Authority's Tax Covenants, all money in the Payment Fund will be set aside by the Trustee in the following accounts within the Payment Fund in the following order of priority:

- (a) Interest Account,
- (b) Principal Account, and
- (c) Redemption Account.

All money in each of such accounts will be held in trust by the Trustee and will be applied, used and withdrawn only for the purposes authorized in the Indenture.

**Interest Account.** On or before each Interest Payment Date, the Trustee will set aside from the Payment Fund and deposit in the Interest Account that amount of money which, together with any money contained in the Interest Account, is equal to the aggregate amount of interest becoming due and payable on all Outstanding Bonds on such Interest Payment Date. No deposit need be made in the Interest Account if the amount contained in the Interest Account is at least equal to the aggregate amount of interest becoming due and payable on all Outstanding Bonds on such Interest Payment Date.

All money in the Interest Account will be used and withdrawn by the Trustee solely for the purpose of paying the interest on the Bonds as it becomes due and payable (including accrued interest on any Bonds purchased or redeemed prior to maturity).

**Principal Account.** On or before May 15 of each year, the Trustee will set aside from the Payment Fund and deposit in the Principal Account an amount of money equal to the aggregate principal amount of all Outstanding Serial Bonds maturing on such May 15 plus the aggregate amount of all sinking fund payments required to be made with respect to the Term Bonds on such May 15. No deposit need be made in the Principal Account if the amount contained therein is at least equal to the aggregate amount of the principal of all Outstanding Serial Bonds maturing by their terms on such May 15 plus the aggregate amount of all sinking fund payments required to be made on such May 15 for all Outstanding Term Bonds.

The Trustee will establish and maintain within the Principal Account a separate subaccount for the Term Bonds of each series and maturity, designated as the "Sinking Account" (the "Sinking Account"). With respect to each Sinking Account, on each mandatory sinking account payment date established for such Sinking Account, the Trustee will apply the mandatory sinking account payment required on that date to the redemption (or payment at maturity) of Term Bonds of the series and maturity for which such Sinking Account was established, upon the notice and in the manner provided in the Indenture or in the Supplemental Indenture pursuant to which such series of Bonds were issued; provided that, at any time prior to giving such notice of such redemption, at the direction of



the City or the Authority, the Trustee may apply moneys in such Sinking Account to the purchase of Term Bonds of such series and maturity at public or private sale, as and when and at such prices (including brokerage and other charges, but excluding accrued interest, which is payable from the Interest Account) as will be determined by the Authority, except that the purchase price (excluding accrued interest) will not exceed the redemption price that would be payable for such Bonds upon redemption by application of such mandatory sinking account payment. If, during the twelve-month period immediately preceding said mandatory sinking account payment date, the Trustee has purchased Term Bonds of such series and maturity with moneys in such Sinking Account, such Bonds so purchased will be applied, to the extent of the full principal amount thereof, to reduce said mandatory sinking account payment.

All money in the Principal Account will be used and withdrawn by the Trustee solely for the purpose of paying the principal of the Bonds as they will become due and payable, except that any money in any Sinking Account will be used and withdrawn by the Trustee only to purchase or to redeem or to pay Term Bonds for which such Sinking Account was created.

Redemption Account. All money in the Redemption Account will be held in trust by the Trustee and will be applied, used and withdrawn either to redeem Bonds pursuant to the Indenture or for the purposes authorized in the Indenture. Any moneys which, pursuant to the prepayment section of the Installment Purchase Agreement, are to be used to redeem Bonds will be deposited by the Trustee in the Redemption Account. The Trustee will, on the scheduled redemption date, withdraw from the Redemption Account and pay to the Owners entitled thereto an amount equal to the redemption price of the Bonds to be redeemed on such date.

Any delinquent Installment Payments with respect to the Project will be applied first to the Interest Account for the immediate payment of interest payments past due and then to the Principal Account for immediate payment of principal payments past due according to the tenor of any Bond, and then to the Reserve Fund to the extent necessary to make the amount on deposit therein equal to the Reserve Requirement. Any remaining money representing delinquent Installment Payments will be deposited in the Payment Fund to be applied in the manner provided therein.

Reserve Fund. After making the required deposits into the accounts of the Payment Fund, the Trustee will deposit in the Reserve Fund an amount of money which, together with the amount already on deposit therein, will be equal to the Reserve Requirement. No deposit need be made in the Reserve Account so long as there will be on deposit therein a sum equal to at least the Reserve Requirement. The Trustee will promptly notify the City if the amount on deposit in the Reserve Account is less than the Reserve Requirement.

All money in the Reserve Fund shall be used and withdrawn by the Trustee solely for the purpose of paying the interest on, or principal of, or redemption premiums, if any, on the Bonds in the event that no other money of the Authority is lawfully available therefor, or for the retirement of all Bonds then Outstanding. All interest income received by the Trustee on investment of moneys in the Reserve Fund shall be retained in the Reserve Fund so long as amounts on deposit in the Reserve Fund are less than the Reserve Requirement. Subject to the foregoing, earnings and profits on investments in the Reserve Fund after completion of the Project will be transferred to the Payment Fund.

Notwithstanding anything in the Indenture to the contrary, at the option of the City, amounts required to be held in the Reserve Fund may be withdrawn, in whole or in part, upon the deposit of a Credit Facility with the Trustee, in a stated amount equal to the amounts so withdrawn, provided, that prior to the deposit of such Credit Facility, each of the Rating Agencies then rating the Bonds shall be notified of such proposed withdrawal and the deposit of such Credit Facility shall not result in a withdrawal or downgrading of any rating of the Bonds then in effect by each of the Rating Agencies then rating the Bonds. Any such withdrawn moneys shall be transferred, at the election of the City, to the Acquisition Fund, to the Redemption Account in the Payment Fund, to the Principal Account in the Payment Fund or to a special account to be established for the payment of any fees in connection with obtaining such Credit Facility.

Rebate Fund. To the extent required by the Tax Certificate, certain amounts made available by the Authority pursuant to a Written Request of the City will be deposited by the Trustee in the Rebate Fund and

thereafter paid to the federal government of the United States of America to the extent required to satisfy the Rebate Requirement (as defined in the Tax Certificate). None of the City, the Authority, the Trustee nor the Owners of the Bonds will have any right in or claim to such money. Any moneys remaining in the Rebate Fund after payment or prepayment of all of the Bonds and payment and satisfaction of any Rebate Requirement, after payment of all fees and expenses of the Trustee, will be remitted to the City.

**Investment of Moneys in Funds and Accounts.** Moneys in the Acquisition Fund will be accounted for by the Auditor and Comptroller and invested by the Treasurer in any legally permitted investment, including but not limited to the pooled investment fund of the Treasurer. Moneys in the Reserve Fund and the Payment Fund and any accounts therein will, upon the Written Request of the City, on behalf of the Authority, be invested by the Trustee in Permitted Investments. In the absence of a Written Request of the City, the Trustee may invest moneys in such funds and accounts in Permitted Investments described in clause (7) of the definition of Permitted Investments. The obligations in which moneys in the said funds and accounts are invested will mature prior to the date on which such moneys are estimated to be required to be paid out under the Indenture; provided that with respect to the Reserve Fund, such obligations will mature no later than ten years from the date of purchase. Prior to the completion of the acquisition, construction, installation and improvement of the Project, any interest, income or profits from the deposits or investments of all funds and accounts (except the Rebate Fund) will be retained in such fund or account, except that interest, income and profits from the deposits or investments of the Reserve Fund will be deposited in the Interest Account of the Payment Fund so long as amounts on deposit in the Reserve Fund are at least equal to the Reserve Requirement. After the completion of the acquisition, construction, installation and improvement of the Project, any interest, income or profits from the deposits or investments of all funds and accounts (except the Rebate Fund) will be deposited first to the Reserve Funds to the extent amounts on deposit therein are less than the Reserve Requirement, and thereafter to the Interest Account of the Payment Fund. For purposes of determining the amount of deposit in any fund or account held under the Indenture, all investments will be valued at the market value thereof. The Trustee will value the investments in the funds and accounts held under the Indenture semi-annually, on or about May 15 and November 15, commencing May 15, 1994, and at such times as the Authority deems appropriate.

#### **Issuance of Additional Bonds**

The Authority may by Supplemental Indenture issue Additional Bonds payable from the Revenues and secured by the pledge of the Revenues made under the Indenture equal to the pledge securing the Outstanding Bonds previously issued, but only upon compliance by the Authority with the provisions of the Indenture and any additional requirements set forth in such Supplemental Indenture and subject to the following specific conditions, which are conditions precedent to the issuance of any such Additional Bonds.

(a) The Authority will be in compliance with all agreements and covenants contained in the Indenture and all agreements and covenants contained in the Installment Purchase Agreement.

(b) The Authority will have satisfied the requirements relating to Additional Obligations in the Installment Purchase Agreement.

(c) The issuance of such Additional Bonds will have been authorized by the Authority and will have been provided for by Supplemental Indenture which shall specify the following:

(1) the purpose for which such Additional Bonds are to be issued; provided that such Additional Bonds shall be applied solely for the purpose of (i) financing or refinancing additional improvements to the Project, and/or (ii) refunding any Bonds then Outstanding;

(2) the authorized principal amount and designation of such Additional Bonds;

(3) the dated date and the maturity dates of, and the sinking fund payment dates, if any, the interest payment dates (which will be Interest Payment Dates) for such Additional Bonds;

(4) that such Additional Bonds will be issued only in Authorized Denominations;

(5) the redemption premiums, if any, and the redemption terms, if any, for such Additional Bonds;

(6) the amount, if any, to be deposited from the proceeds of sale of such Additional Bonds in the Interest Account;

(7) the amount, if any, to be deposited from the proceeds of sale of such Additional Bonds in the Acquisition Fund;

(8) the amount to be deposited from the proceeds of sale of such Additional Bonds in the Reserve Fund, which amount will be sufficient to cause the amount on deposit in the Reserve Account to equal the Reserve Requirement upon the issuance of such Additional Bonds;

(9) the forms of such Additional Bonds; and

(10) such other provisions as are necessary or appropriate and not inconsistent with the Indenture.

(d) The Installment Purchase Agreement will have been amended to increase the Installment Payments by the City thereunder by an amount at least sufficient to pay the interest on and principal of such Additional Bonds as the same become due.

Nothing contained in the Indenture will limit the issuance of any revenue bonds of the Authority payable from the Revenues and secured by a pledge of the Revenues if after the issuance and delivery of such revenue bonds none of the Bonds issued under the Indenture will be Outstanding.

#### **Selected Covenants of the Authority**

**Punctual Payment and Performance.** The Authority will punctually pay the interest on and the principal of and redemption premiums, if any, to become due on every Bond issued under the Indenture in strict conformity with the terms of the Indenture and of the Bonds, and will faithfully observe and perform all the agreements and covenants contained in the Indenture and in the Bonds.

**Tax Covenants.** The Authority will not use or permit any proceeds of the Bonds or any funds of the Authority, directly or indirectly, to acquire any securities or obligations, and will not take or permit to be taken any other action or actions, which would cause any Bonds to be an "arbitrage bond" within the meaning of the Code or "federally guaranteed" within the meaning of Section 149(b) of the Code and any such applicable regulations promulgated from time to time thereunder and under Section 103(c) of the Internal Revenue Code of 1986, as amended. The Authority will observe and not violate the requirements of Section 148 of the Code and any such applicable regulations. The Authority will comply with all requirements of Sections 148 and 149(b) of the Code to the extent applicable to the Bonds.

The Authority will not use or permit the use of any proceeds of the Bonds or any funds of the Authority, directly or indirectly, in any manner, and will not take or omit to take any action that would cause any of the Bonds to be treated as an obligation not described in Section 103(a) of the Code.

Notwithstanding any provisions of the Indenture, if the Authority provides to the Trustee an opinion of Bond Counsel to the effect that any specified action required under the Indenture is no longer required or that some further or different action is required to maintain the exclusion from gross income for federal income tax purposes of interest with respect to the Bonds, the Trustee, the Authority and the City may conclusively rely on such opinion in complying with the requirements of the Indenture and the covenants under the Indenture will be deemed to be modified to that extent.

**Eminent Domain.** If the whole of the Project or so much as to render the remainder unusable for the purposes for which it was used or intended to be used by the City will be taken under the power of eminent domain,

the term of the Installment Purchase Agreement will cease as of that day that possession will be taken. The Authority will take or cause to be taken such action as is reasonably necessary to obtain compensation at least equal to the value of the Project or portion thereof taken by eminent domain. If less than the whole of the Project is taken under the power of eminent domain and the remainder is usable for the purposes for which it was used by the City at the time of such taking, then the Installment Purchase Agreement will continue in full force and effect as to such remainder, and the parties thereto waive the benefits of any law to the contrary. So long as any of the Bonds shall be Outstanding, the net proceeds of any award made in eminent domain proceedings for taking the Project or any portion thereof will be transferred to the Payment Fund. Any such award made after all of the Bonds have been fully paid and retired will be paid to the City.

Accounting Records and Reports. The Authority will keep or cause to be kept proper books of record and accounts in which complete and correct entries will be made of all transactions relating to the receipts, disbursements, allocation and application of the Revenues, and such books will be available for inspection by the Trustee, at reasonable hours and under reasonable conditions. Not more than two hundred seventy (270) days after the close of each Fiscal Year, the Authority will furnish or cause to be furnished to the Trustee a complete financial statement covering receipts, disbursements, allocation and application of Revenues for such Authority Fiscal Year, and including a profit and loss statement and balance sheet. The Authority will also keep or cause to be kept such other information as is required under the Tax Certificate.

The City's Budget. The Authority will supply to the Trustee, as soon as practicable after the beginning of each Fiscal Year, a Certificate of the City certifying that the City has made adequate provision in its annual budget for such Fiscal Year for the payment of all installments due under the Installment Purchase Agreement in such Fiscal Year. If the amounts so budgeted are not adequate for the payment of all installments due under the Installment Purchase Agreement in such Fiscal Year, the Authority will take such action as may be necessary and within its power to cause such annual budget to be amended, corrected or augmented so as to include therein the amounts required to be paid by the City in such Fiscal Year for the payment of all installments due under the Installment Purchase Agreement in such Fiscal Year, and will notify the Trustee of the proceedings then taken or proposed to be taken by the Authority.

Installment Purchase Agreement and Other Documents. The Authority will at all times maintain and vigorously enforce all of its rights under the Installment Purchase Agreement, and will promptly collect all installments due for the purchase of the Project as the same become due under the Installment Purchase Agreement, and will promptly and vigorously enforce its rights against any person who does not pay such installments as they become due under the Installment Purchase Agreement. The Authority will not do or permit anything to be done, or omit or refrain from doing anything, in any case where any such act done or permitted to be done, or any such omission of or refraining from action, would or might be a ground for cancellation or termination of the Installment Purchase Agreement by the purchaser thereunder.

Other Liens. The Authority will keep the Project free from judgements, mechanics' and materialmen's liens (except those arising from the acquisition, construction and installation of the Project) and free from all liens, claims, demands and encumbrances of whatsoever prior nature or character to the end that the security for the Bonds provided in the Indenture will at all times be maintained and preserved free from any claim or liability which, in the judgment of the Trustee, might hamper the Authority in conducting its business or interfere with the City's operation of the Project, and the Trustee at its option may (but will not be obligated to) defend against any and all actions or proceedings in which the validity of the Indenture is or might be questioned, or may pay or compromise any claim or demand asserted in any such action or proceeding; provided, however, that in defending such actions or proceedings or in paying or compromising such claims or demands the Trustee will not in any event be deemed to have waived or released the Authority from liability for or on account of any of its agreements and covenants contained in the Indenture, or from its liability to defend the validity of the Indenture and the pledge of the Revenues made therein and to perform such agreements and covenants. Nothing in the Indenture will preclude the City, or require the Authority to prevent, the operation or transfers of the Project as permitted under the Installment Purchase Agreement.

Acquisition and Construction of the Project and Sale of the Project. The Authority will acquire and construct the Project, or cause the Project to be acquired and constructed, with moneys in the Acquisition Fund and will sell the Project to the City pursuant to the Installment Purchase Agreement.

## **The Trustee**

Appointment and Acceptance of Duties. Pursuant to the Indenture, the Trustee accepts and agrees to the trusts created by the Indenture, to all of which the Authority agrees and the respective Owners of the Bonds, by their purchase and acceptance thereof, agree.

Duties, Immunities and Liabilities of Trustee. The Trustee will, prior to an event of default under the Indenture, and after the curing of all events of default which may have occurred, perform such duties and only such duties as are specifically set forth in the Indenture and no implied duties or obligations will be read into the Indenture against the Trustee. The Trustee will, during the existence of any event of default (which has not been cured), exercise such of the rights and powers vested in it by the Indenture, and use the same degree of care and skill in their exercise as a prudent person would exercise or use under the circumstances in the conduct of his own affairs.

So long as no event of default under the Indenture has occurred and is continuing, the Authority, with the consent of AMBAC Indemnity, may remove the Trustee at any time and will remove the Trustee if at any time requested to do so by AMBAC Indemnity for any breach of the trust set forth in the Indenture, or by an instrument in writing signed by the Owners of not less than a majority in aggregate principal amount of the Bonds then Outstanding or if at any time the Trustee will cease to be a trust company or bank having the powers of a trust company, having a corporate trust office in California, having a combined capital and surplus of \$100,000,000, and subject to supervision or examination by federal or state authority, or will become incapable of acting, or will commence a case under any bankruptcy, insolvency or similar law, or a receiver of the Trustee or of its property will be appointed, or any public officer will take control or charge of the Trustee or its property or affairs for the purpose of rehabilitation, conservation or liquidation, in each case by giving written notice of such removal to the Trustee, and thereupon will appoint a successor Trustee by an instrument in writing, but any successor trustee must be a trust company or bank having the powers of a trust company, having a corporate trust office in California, having a combined capital and surplus of \$100,000,000 and acceptable to AMBAC Indemnity, and subject to supervision or examination by federal or state authority.

The Trustee may resign by giving prior written notice of such resignation to the Authority and AMBAC Indemnity, and by giving notice of such resignation by mail, first class postage prepaid, to the Owners at the addresses listed in the bond register. Upon receiving such notice of resignation, the Authority will promptly appoint a successor Trustee by an instrument in writing.

Any removal or resignation of the Trustee and appointment of a successor Trustee will become effective upon acceptance of appointment by the successor Trustee. If no successor Trustee will have been appointed and will have accepted appointment within 45 days of giving notice of removal or notice of resignation as aforesaid, the resigning Trustee, at the expense of the Authority, or any Owner (on behalf of himself and all other Owners) may petition any court of competent jurisdiction for the appointment of a successor Trustee.

## **Amendment of the Indenture**

The Indenture and the rights and obligations of the Authority and of the Owners may be amended at any time by a Supplemental Indenture which will become binding when the written consents of AMBAC Indemnity and the Owners of at least 60% in aggregate principal amount of the Bonds then Outstanding, exclusive of Bonds disqualified as provided in the Indenture, are filed with the Trustee. No such amendment will (a) extend the maturity of or reduce the interest rate on or otherwise alter or impair the obligation of the Authority to pay the interest on or principal of or redemption premium, if any, on any Bond at the time and place and at the rate and in the currency provided in the Indenture without the express written consent of the Owner of such Bond, or (b) permit the creation by the Authority of any pledge of the Revenues superior to or on a parity with the pledge created

thereby for the benefit of the Bonds, or (c) increase the dollar amount of the Bonds, or (d) modify any rights or obligations of the Trustee without its prior written assent thereto.

The Indenture and the rights and obligations of the Authority and of the Owners may also be amended at any time by a Supplemental Indenture which will become binding upon adoption without the consent of any Owners (but with the consent of AMBAC Indemnity), but only to the extent permitted by law and after receipt of an approving opinion of Bond Counsel, but only for any one or more of the following purposes: (a) to make such provisions for the purpose of curing any ambiguity or of correcting, curing or supplementing any defective provision contained in the Indenture in regard to questions arising thereunder which the Authority may deem desirable or necessary and not inconsistent therewith and which will not adversely affect the interests of the Owners; (b) to make any other change or addition to the Indenture which will not materially adversely affect the interests of the Owners, or to surrender any right or power reserved therein to or conferred therein on the Authority; or (c) to provide for the issuance of any Additional Bonds and to provide the terms of such Additional Bonds, subject to the conditions and upon compliance with the procedure set forth in the Indenture.

#### **Events of Default and Remedies of Owners**

The following will be events of default under the Indenture:

- (a) failure in the due and punctual payment of the interest on any Bond when and as the same will become due and payable;
- (b) failure in the due and punctual payment of the principal of or redemption premium, if any, on any Bond when and as the same will become due and payable, whether at maturity as therein expressed or by proceedings for redemption;
- (c) failure by the Authority in the performance of any of the other agreements or covenants required on its part contained in the Indenture, and such default has continued for a period of 60 days after the Authority has been given written notice of such default by the Trustee or by a Credit Facility provider or to the Authority and the Trustee by Owners of not less than 25% of the Bonds;
- (d) if any event of default will have occurred and be continuing under the Installment Purchase Agreement; or
- (e) if the Authority files a petition or answer seeking arrangement or reorganization under the federal bankruptcy laws or any other applicable law of the United States of America or any state therein, or if a court of competent jurisdiction approves a petition filed with or without the consent of the Authority seeking arrangement or reorganization under the federal bankruptcy laws or any other applicable law of the United States of America or any state therein, or if under the provisions of any other law for the relief or aid of debtors any court of competent jurisdiction will assume custody or control of the Authority or of the whole or any substantial part of its property.

If an event of default has occurred and is continuing, the Trustee may, with the consent of AMBAC Indemnity and the Bond Insurer, or shall, at the direction of AMBAC Indemnity, or upon the written request of the Owners of not less than 25% in aggregate principal amount of the Bonds then Outstanding, with the consent of AMBAC Indemnity, by written notice to the Authority and AMBAC Indemnity, shall declare the principal of all Bonds then Outstanding and the interest accrued thereon to be due and payable immediately, and upon any such declaration the same will become due and payable.

In addition, the Trustee in its discretion may, and at the written request of the Owners of not less than 25% in aggregate principal amount of Bonds Outstanding or any provider of a then existing Credit Facility, and upon being indemnified to its satisfaction therefor, will proceed to enforce all rights of the Owners and require the Authority to enforce all rights of the Owners of the Bonds under the Indenture, the Bonds or any law by whatever appropriate judicial proceeding or proceedings the Trustee deems most effectual.

Anything in the Indenture to the contrary notwithstanding, subject to the consent of AMBAC Indemnity and to the limitations and restrictions as to the rights of the Owners, upon the happening and continuance of any event of default under the Indenture, the Owners of not less than 25 % in aggregate principal amount of the Bonds then Outstanding will have the right upon providing the Trustee security and indemnity reasonably satisfactory to it, to direct the method and place of all remedial proceedings to be taken by the Trustee under the Indenture. The Trustee may refuse to follow any direction that conflicts with law or the Indenture or that the Trustee determines is prejudicial to rights of other Owners or would subject the Trustee to personal liability. No Owner of any of the Bonds will have any right to institute any proceeding for the enforcement of any trust under the Indenture, or any other remedy thereunder or on said Bonds, unless such Owner previously has given to the Trustee written notice of an event of default and unless the Owners of not less than 25 % in aggregate principal amount of the Bonds then Outstanding will have made written request of the Trustee to institute any such proceeding or other remedy, after the right to exercise such powers will have accrued, and will have afforded the Trustee a reasonable opportunity either to proceed to exercise the powers in the Indenture granted, or to institute such action, suit or proceeding in its or their name; nor unless there also will have been offered to the Trustee security and indemnity satisfactory to it against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee will not have complied with such request within a reasonable time.

For purposes of the Indenture provisions governing events of default and remedies under the Indenture, except the giving of notice of default to Owners, the Bond Insurer shall be deemed to be the sole holder of the 1995 Bonds it has insured for so long as it has not failed to comply with its payment obligations under the Bond Insurance Policy.

#### **Consent of AMBAC Indemnity Upon Default**

Anything in the Indenture to the contrary notwithstanding, upon the occurrence and continuance of an event of default under the Indenture, AMBAC Indemnity will be entitled to control and direct the enforcement of all rights and remedies granted to (1) the Owners of the Insured Bonds or (2) the Trustee for the benefit of such Owners under the Indenture, including, without limitation: (i) the right to accelerate the principal of the Bonds as described in the Indenture and (ii) the right to annul any declaration of acceleration and AMBAC Indemnity will also be entitled to approve all waivers of events of default.

Notwithstanding any other provision of the Indenture, the Authority will immediately notify AMBAC Indemnity if at any time there are insufficient moneys to make any payments of principal and/or interest as required and immediately upon the occurrence of any event of default under the Indenture and shall provide such additional information as AMBAC Indemnity shall reasonably request.

#### **Defeasance**

If the Authority pays or causes to be paid or there is otherwise paid to the Owners of all Outstanding Bonds the interest thereon and the principal thereof and the redemption premiums, if any, thereon at the times and in the manner stipulated therein, then the Owners of such Bonds will cease to be entitled to the pledge of the Revenues as provided in the Indenture, and all agreements, covenants and other obligations of the Authority to the Owners of such Bonds thereunder will thereupon cease, terminate and become void and be discharged and satisfied.

Subject to the provisions of the above paragraph, when any of the Bonds shall have been paid and the Authority has kept, performed and observed all the covenants and promises in such Bonds and in the Indenture required to be kept, performed and observed by the Authority or on its part on or prior to that time, then the Indenture will be considered to have been discharged in respect of such Bonds and such Bonds will cease to be entitled to the lien of the Indenture and such lien and all covenants, agreements and other obligations of the Authority under the Indenture will cease, terminate become void and be completely discharged as to such Bonds.

Any Outstanding Bonds will prior to the maturity date or redemption date thereof be deemed to have been paid if (1) in case any of such Bonds are to be redeemed on any date prior to their maturity date, the Authority shall have given to the Trustee in form satisfactory to it irrevocable instructions to mail, on a date in accordance with the provisions of the Indenture notice of redemption of such Bonds on said redemption date, said notice to be given

in accordance with the Indenture, (2) there shall have been deposited with the Trustee either (A) money in an amount which shall be sufficient or (B) Federal Securities of which are not subject to redemption prior to maturity except by the holder thereof (including any such Permitted Investments issued or held in book-entry form on the books of the Department of Treasury of the United States of America) and/or Pre-Refunded Municipals, the interest on and principal of which when due, and without any reinvestment thereof, will provide money which, together with the money, if any, deposited with the Trustee at the same time, shall, as verified by an independent certified public accountant, be sufficient, to pay when due the interest to become due on such Bonds on and prior to the maturity date or redemption date thereof, as the case may be, and the principal of and redemption premiums, if any, on such Bonds, and (3) in the event such Bonds are not by their terms subject to redemption within the next succeeding 60 days, the Authority will have given the Trustee in form satisfactory to it irrevocable instructions to mail as soon as practicable, a notice to the Owners of such Bonds and to the Securities Depositories and the Information Services that the deposit required by clause (2) above has been made with the Trustee and that such Bonds are deemed to have been paid in accordance with the Indenture and stating the maturity date or redemption date upon which money is to be available for the payment of the principal of and redemption premiums, if any, on such Bonds.

Notwithstanding anything in the Indenture to the contrary, in the event that the principal and/or interest due on the Insured Bonds shall be paid by AMBAC Indemnity pursuant to the Municipal Bond Insurance Policy, the Insured Bonds shall remain Outstanding for all purposes, not be defeased or otherwise satisfied and not be considered paid by the Authority, and the assignment and pledge of the trust estate and all covenants, agreements and other obligations of the Authority to the Owners will continue to exist and will run to the benefit of AMBAC Indemnity and AMBAC Indemnity will be subrogated to the rights of such Owners.

## **Second Supplemental Indenture**

### **Creation of 1995 Account of Acquisition Fund; Use of Moneys in 1995 Account.**

There is created in the Acquisition Fund an account designated as the "1995 Account." The Treasurer will hold the moneys in the 1995 Account of the Acquisition Fund and the Auditor and Comptroller shall disburse such moneys therefrom to pay Acquisition Costs and to pay Costs of Issuance with respect to the 1995 Bonds.

If, after payment by the Auditor and Comptroller of all Written Requests of the City on behalf of the Authority theretofore tendered to the Auditor and Comptroller under the provisions of the Second Supplemental Indenture and delivery to the Treasurer, the Auditor and Comptroller and the Trustee of a Certificate of Completion with respect to the portion of the Project to be financed with amounts on deposit in the 1995 Account, there remains any balance of money in the 1995 Account, all money so remaining shall be transferred to the Trustee and deposited, first to the Reserve Fund to the extent necessary to make the amount on deposit therein equal to the Reserve Requirement, and thereafter to the accounts of the Payment Fund as directed by the Authority.

**Pledge of Revenues.** Pursuant to the Indenture, the 1995 Bonds are special, limited obligations of the Authority payable solely from and secured by Revenues (consisting of Installment Payments made pursuant to the Installment Purchase Agreement) and amounts on deposit in the funds and accounts established under the Indenture (other than amounts on deposit in the Rebate Fund). All such moneys are irrevocably pledged to the payment of principal of, interest on and redemption premium, if any, on the 1995 Bonds. The pledge made under the Indenture constitutes a first lien and pledge of Revenues, and within such lien priority, 1995 Bonds are of equal rank, without preference, priority or distinction, with all other Bonds Outstanding.

### **Additional Covenants.**

**Tax Covenants.** The Authority covenants to comply with the provisions and procedures of the Tax Certificate relating to the 1995 Bonds, including depositing of all amounts required to be deposited in the Rebate Fund from the sources specified in the Indenture.

The Authority will not use or permit any proceeds of the 1995 Bonds or any funds of the Authority, directly or indirectly, to acquire any securities or obligations, and shall not take or permit to be taken any other



action or actions, which would cause any 1995 Bonds to be an "arbitrage bond" within the meaning of the Code or "federally guaranteed" within the meaning of Section 149(b) of the Code and any such applicable regulations promulgated from time to time thereunder and under Section 103(c) of the Code. The Authority shall observe and not violate the requirements of Section 148 of the Code and any such applicable regulations. The Authority shall comply with all requirements of Sections 148 and 149(b) of the Code to the extent applicable to the 1995 Bonds.

The Authority will not use or permit the use of any proceeds of the 1995 Bonds or any funds of the Authority, directly or indirectly, in any manner, and shall not take or omit to take any action that would cause any of the 1995 Bonds to be treated as an obligation not described in Section 103(a) of the Code.

Notwithstanding any provisions of the Second Supplemental Indenture, if the Authority shall provide to the Trustee an opinion of Bond Counsel to the effect that any specified action required under the Second Supplemental Indenture is no longer required or that some further or different action is required to maintain the exclusion from gross income for federal income tax purposes of interest with respect to the 1995 Bonds, the Trustee, the Authority and the City may conclusively rely on such opinion in complying with the requirements of this Section and, notwithstanding the Prior Indenture, the covenants under the Second Supplemental Indenture will be deemed to be modified to that extent.

Continuing Disclosure. The Trustee covenants and agrees that it will comply and carry out all of the provisions of the Continuing Disclosure Agreement. Notwithstanding any other provision of the Indenture, failure of the City or the Trustee to comply with the Continuing Disclosure Agreement shall not be considered an Event of Default; however, the Trustee may (and, at the request of any Participating Underwriter or the Owners of at least 25% aggregate principal amount of Outstanding Bonds, shall) or any Owner or Beneficial Owner may take such actions as may be necessary and appropriate, including seeking specific performance by court order, to cause the City to comply with its obligations under the 1995-1 Supplement or to cause the Trustee to comply with its obligations under the Second Supplemental Indenture. For additional information, see "THE CONTINUING DISCLOSURE AGREEMENT" below.

## **THE INSTALLMENT PURCHASE AGREEMENT**

### **General**

The Installment Purchase Agreement provides the terms and conditions of the purchase of the Project by the City. Certain provisions of the Installment Purchase Agreement are summarized below. These summaries do not purport to be complete or definitive and are qualified in their entireties by reference to the full terms of the Installment Purchase Agreement.

Acquisition and Construction of the Project. The Authority has agreed to cause the Project to be constructed, acquired and installed by the City, as agent of the Authority. The City will enter into contracts and provide for, as agent of the Authority, the complete construction, acquisition and installment of the Project. The City has agreed that it will cause the construction, acquisition and installation of the Project to be diligently performed. Except to the extent of proceeds of the Obligations which are deposited in the Acquisition Fund, the Authority will be under no liability of any kind or character whatsoever for the payment of any cost of any Components. In the event the proceeds of the Obligations deposited in the Acquisition Fund are insufficient to complete the construction, acquisition and installation of Components, the City will cause to be deposited in the Acquisition Fund (or otherwise appropriate and encumber) from and to the extent of available amounts on deposit in the Sewer Revenue Fund (or other lawfully available moneys) an amount equal to that necessary to complete the construction, acquisition and installation of such Components.

The Authority will not undertake to cause any component of the Project to be constructed, acquired or installed unless and until the City and the Authority have entered into a Supplement specifying the components of the Project to be installed, the date of completion, the Purchase Price to be paid by the City under the Installment Purchase Agreement for that Component of the Project, and the Installment Payments or the method of calculating Installment Payments.

**Changes to the Project.** The City may modify or amend the description of the Project, to eliminate any part thereof and/or to substitute another Project or Projects, all without obtaining any consent, by filing such modification or amendment with the Authority and the Trustee; provided that no such amendment will substitute a Project or Projects which are not to be owned by the Sewer Revenue Fund or will in any way impair the obligations of the City contained in any Supplement executed prior to such amendment. The City may substitute other improvements for those listed as Components in any Supplement, but only if the City first files with the Authority and the Trustee a certificate of an Authorized City Representative: (a) identifying the Components to be substituted and the Components they replace; (b) stating that the substituted Components will be owned by the Sewer Revenue Fund; and (c) stating that with respect to Components financed with Tax-Exempt Installment Obligations, the estimated costs of construction, acquisition and installation of the substituted improvements are not less than such costs for the improvements previously planned.

## **Installment Payments**

**Purchase Price.** The City will pay the Purchase Price for any Components being purchased as provided in a Supplement. The Purchase Price to be paid by the City under any Supplement to the Installment Purchase Agreement, solely from Net System Revenues and from no other sources, is the sum of the principal amount of the City's obligations under any Supplement plus the interest to accrue on the unpaid balance of such principal amount from the effective date and over the term of the Supplement, subject to prepayment provisions as provided therein.

The principal amount of the Installment Payments and interest thereon to be made by the City under a Supplement will be paid as specified in such Supplement. Interest shall be payable in an amount not exceeding the Maximum Rate.

**Installment Payments.** The City may, subject to any rights of prepayment provided in a Supplement, pay to the Authority, solely from Net System Revenues and from no other sources, the Purchase Price in Installment Payments over a period not to exceed the maximum period permitted by law.

The obligation of the City to make the Installment Payments solely from Net System Revenues is absolute and unconditional, and until such time as the Purchase Price has been paid in full (or provision for the payment thereof has been made, the City will not discontinue or suspend any Installment Payments required to be made by it when due, whether or not the Project or any part thereof is operating or operable or has been completed, or its use is suspended, interfered with, reduced or curtailed or terminated in whole or in part, and such Installment Payments will not be subject to reduction whether by offset or otherwise and will not be conditioned upon the performance or nonperformance by any party of any agreement for any cause whatsoever.

The City agrees and covenants under the Installment Purchase Agreement that all System Revenues will be received by the City in trust and will be deposited when received in the Sewer Revenue Fund. The City agrees and covenants to maintain the Sewer Revenue Fund so long as any Installment Payments or payments due by the City under any Qualified Swap Agreement remain unpaid, and all moneys in the Sewer Revenue Fund will be so held in trust and applied and used solely as provided in the Installment Purchase Agreement.

## **Selected Covenants of the City**

**Compliance with Installment Purchase Agreement, Ancillary Agreements.** The City will punctually pay Parity Obligations in strict conformity with the terms of the Installment Purchase Agreement and thereof, and will faithfully observe and perform all the agreements, conditions, covenants and terms contained in the Installment Purchase Agreement and will not terminate the Installment Purchase Agreement for any cause including, any acts or circumstances that may constitute failure of consideration, destruction of or damage to the Project, commercial frustration of purpose, any change in the tax or other laws of the United States of America or of the State or any political subdivision of either or any failure of the Authority to observe or perform any agreement, condition, covenant or term contained in the Installment Purchase Agreement or any duty, liability or obligation arising out of or connected therewith or the insolvency, or bankruptcy, or liquidation of the Authority, or any force majeure, including but not limited to, acts of God or acts or regulations of governmental authorities.

The City will faithfully observe and perform all the agreements, conditions, covenants and terms contained in the Installment Purchase Agreement, including Supplements, and any Issuing Instrument or Qualified Swap Agreement relating to Parity Obligations required to be observed and performed by it and each of the agreements, conditions, covenants and terms contained in each such contract and agreement is an essential and material term of the purchase of and payment for each Component by the City pursuant to, in accordance with, and as authorized under the Law.

Against Encumbrances, Sale or Competitive Facilities. The City will not make any pledge of or place any lien on the Net System Revenues except as otherwise provided in the Installment Purchase Agreement. The City will not sell, lease or otherwise dispose of the Wastewater System or any part thereof essential to the proper operation of the Wastewater System or to the maintenance of the System Revenues, except as provided in the Installment Purchase Agreement. The City will not enter into any agreement or lease which impairs the operation of the Wastewater System or any part thereof necessary to secure adequate Net System Revenues for the payment of the Parity Obligations or which would otherwise impair the rights of the Authority with respect to the System Revenues or the operation of the Wastewater System.

Except as permitted under the Installment Purchase Agreement, the City will not, to the extent permitted by existing law, construct, acquire, maintain or operate and will not, to the extent permitted by existing law and within the scope of its powers, permit any other public or private agency, corporation, district or political subdivision or any person whomsoever to acquire, construct, maintain or operate within the City any wastewater system competitive with the City's Wastewater System.

Transfer of Metropolitan System Components. Notwithstanding anything to the contrary in the Installment Purchase Agreement, the City may transfer ownership of substantially all of the Metropolitan System, including amounts in the Sewer Revenue Fund attributable to the Metropolitan System, and any amounts in the Rate Stabilization Fund agreed upon by the City and the transferee as being attributable to the Metropolitan System, to the District or any other governmental agency whose primary purpose is to provide wastewater treatment and disposal service, provided such entity agrees to assume all Obligations the proceeds of which were used to acquire Components which are part of the Metropolitan System and all other obligations relating to the Metropolitan System which are payable from Metropolitan System Revenues, Net Metropolitan System Revenues, System Revenues or Net System Revenues, including but not limited to salaries and benefits payable to employees who are to become employees of such entity, all accounts payable, Qualified Swap Agreements, Credit Provider Reimbursement Obligations and all other obligations with respect thereto such as capital improvement expenditure obligations and tort claims, and the obligation to pay fines, penalties or damages arising out of or relating to violation of federal, state or local laws or regulations which are applicable or purported to be applicable to the operation of the Metropolitan System and provided that the following conditions are met:

(a) there will not have occurred and be continuing an event of default under the terms of the Installment Purchase Agreement, or any other Issuing Instrument or Qualified Swap Agreement or any Termination Event (as defined in a Qualified Swap Agreement) under any Qualified Swap Agreement;

(b) there will have been delivered to the Trustee an opinion of Bond Counsel to the effect that the proposed transfer will not have an adverse effect on the exclusion from gross income for federal income tax purposes of the interest component of Tax-Exempt Installment Payment Obligations;

(c) the entity will have obtained all necessary licenses, permits and consents from all governmental agencies or authorities having or asserting jurisdiction over the activities of Metropolitan System;

(d) there will be delivered to all trustees for any Obligations and to any Qualified Swap Provider an opinion of counsel, who may be the City Attorney of the City, to the effect that the Supplements referred to in clauses (h)(1) and (h)(2) below are valid, binding and enforceable against the transferee in the case of a Supplement referred to in clause (h)(1) below and against the City in the case of a Supplement referred to in a clause (h)(2) below;

(e) the City obtains or provides a certificate prepared by a Consultant showing that (i) the estimated Net Metropolitan System Revenues for the next 12 months following the date of transfer will be at least equal to 1.20 times the Maximum Annual Debt Service for all Outstanding Parity Obligations to be assumed by the transferee, assuming for this purpose that the Outstanding Parity Obligations to be assumed by the transferee will include such Obligations; and (ii) the estimated Net Municipal System Revenues for the next 12 months following the date of transfer will be at least equal to 1.20 times the Maximum Annual Debt Service for all Outstanding Parity Obligations not to be assumed by the transferee, assuming for this purpose that the Outstanding Parity Obligations not to be assumed by the transferee will include all such Obligations;

(f) there will be delivered to the Trustee a notice of each of the Rating Agencies then providing ratings on all Obligations to be outstanding immediately after the transfer, reconfirming the ratings on all such Obligations in effect immediately prior to such transfer, without giving effect to any bond insurance, letter of credit, guarantee or other credit support for such Obligations, or alternatively, all such Obligations will be defeased or paid in full prior to such transfer;

(g) there will be delivered to each Owner notice of the intended transfer of Metropolitan System Components not less than 30 nor more than 60 days prior to the expected transfer date; and

(h) incident to a transfer of the Metropolitan System permitted by the Installment Purchase Agreement:

(1) the transferee will execute and deliver to the Trustee a Supplement which will contain the following:

(A) the assumption and indemnification by the transferee of all obligations of the City under the Installment Purchase Agreement, but only as they relate to the Metropolitan System, including Obligations the proceeds of which were used to acquire Components for the Metropolitan System;

(B) a pledge by the transferee of Net Metropolitan System Revenues for the payment of assumed Parity Obligations which will be in substantially the same form as the pledge of the City under the Installment Purchase Agreement of Net System Revenues to secure the payment of all Parity Obligations;

(C) representations of the transferee substantially in the form provided by the City under the Installment Purchase Agreement, but only as to the Obligations assumed by the transferee and the covenants to be contained in such Supplement;

(D) covenants of the transferee relating to the acquisition, construction and changes to the Project, but only as to the Components which are or are to be part of the Metropolitan System;

(E) covenants of the transferee relating to Purchase Payments and Installment Payments, but only as they relate to Parity Obligations being assumed by the transferee and the Net Metropolitan System Revenues;

(F) covenants of the transferee relating to the allocation of System Revenues, but limited only to Parity Obligations assumed by the transferee and moneys deposited from Metropolitan System Revenues and Net Metropolitan System Revenues;

(G) covenants of the transferee relating to Additional Obligations, but only within respect to Parity Obligations payable from Net Metropolitan System Revenues (for this purpose the calculations and coverages contemplated thereby will relate only to

Metropolitan System Revenues, Maintenance and Operations Costs of the Metropolitan System and Net Metropolitan System Revenues);

(H) covenants of the transferee substantially in the form provided by the City under the Installment Purchase Agreement, (exclusive of covenants relating to the transfer of the Metropolitan System and subcontracting), but only to the extent of the Metropolitan System and Installment Payment Obligations payable from Metropolitan System Revenues and Net Metropolitan System Revenues and Installment Payment Obligations assumed by or of the transferee.

(I) events of default and remedies substantially in the form set forth in the Installment Purchase Agreement, but only relating to Parity Obligations assumed by the transferee; and

(J) covenants of the transferee relating to benefits of the Installment Purchase Agreement amendments of the Installment Purchase Agreement and the effective date, but only with respect to Parity Obligations assumed by the transferee;

(2) the City will execute and deliver a Supplement which will reaffirm all of the City's representations and warranties under the Installment Purchase Agreement and each Supplement, the pledge provided for in, and each of the covenants of the City contained in the Installment Purchase Agreement or any Supplement, provided that such representations, warranties, pledges and covenants will be limited solely and exclusively to the Municipal System, Municipal System Revenues, Maintenance and Operations Costs of the Municipal System and Net Municipal System Revenues, as the case may be.

Upon execution and delivery of the such Supplements and upon satisfaction of the conditions specified above, the City will be relieved and discharged from any and all Installment Payment Obligations payable from Net System Metropolitan Revenues and which have been assumed by a transferee.

Maintenance and Operation of the Wastewater System; Budgets. The City will maintain and preserve the Wastewater System in good repair and working order at all times and will operate the Wastewater System in an efficient and economical manner and will pay all Maintenance and Operation Costs of the Wastewater System as they become due and payable. The City will adopt and file with the Authority, on or before the effective date of the Installment Purchase Agreement, a budget approved by the City Council of the City setting forth the estimated Maintenance and Operation Costs of the Wastewater System for the period from such date until the close of the then current Fiscal Year. On or before August 1, of each Fiscal Year, the City will adopt, and on or before 120 days after the beginning of the Fiscal Year, file with the Authority a budget approved by the City Council of the City setting forth the estimated Maintenance and Operation Costs of the Wastewater System for such Fiscal Year. Any budget may be amended at any time during any Fiscal Year and such amended budget will be filed by the City with the Authority.

Amount of Rates and Charges; Rate Stabilization Fund. The City will fix, prescribe and collect rates and charges for the Wastewater Service which will be at least sufficient (a) to pay all Obligations, (other than Parity Obligations), and (b) to yield during each Fiscal Year Net System Revenues equal to one hundred twenty percent (120%) of the Debt Service for such Fiscal Year. The City may make adjustments from time to time in such rates and charges and may make such classification thereof as it deems necessary, but shall not reduce the rates and charges then in effect unless the Net System Revenues from such reduced rates and charges will at all times be sufficient to meet the requirements of the Installment Purchase Agreement.

The City may establish, as a fund within the Sewer Revenue Fund, a fund denominated the Rate Stabilization Fund. From time to time the City may deposit into the Rate Stabilization Fund, from current System Revenues, such amounts as the City shall determine and the amount of available current System Revenues shall be reduced by the amount so transferred. Amounts may be transferred from the Rate Stabilization Fund solely and exclusively to pay Maintenance and Operation Costs of the Wastewater System, and any amounts so transferred will

be deemed System Revenues when so transferred. All interest or other earnings upon amounts in the Rate Stabilization Fund may be withdrawn therefrom and accounted for as System Revenues.

**Insurance.** The City will procure and maintain or cause to be procured and maintained insurance on the Wastewater System with responsible insurers, or provide self insurance reserves, in such amounts and against such risks (including accident to or destruction of the Wastewater System) as are usually covered in connection with wastewater systems similar to the Wastewater System. In the event of any damage to or destruction of the Wastewater System caused by the perils covered by such insurance or self insurance, the Net Proceeds thereof will be applied to the reconstruction, repair or replacement of the damaged or destroyed portion of the Wastewater System. The City will pay out of such Net Proceeds all costs and expenses in connection with such reconstruction, repair or replacement so that the same will be completed and the Wastewater System will be free and clear of all claims and liens unless the City determines that such property or facility is not necessary to the efficient operation of the Wastewater System and therefore determines not to reconstruct, repair or replace such project or facility. If such Net Proceeds exceed the costs of such reconstruction, repair or replacement, then the excess Net Proceeds will be deposited in the Sewer Revenue Fund and be available for other proper uses of funds deposited in the Sewer Revenue Fund.

The City will procure and maintain such other insurance which it will deem advisable or necessary to protect its interests and the interests of the Authority, which insurance will afford protection in such amounts and against such risks as are usually covered in connection with wastewater systems similar to the Wastewater System; provided that any such insurance may be maintained under a self-insurance program so long as such self-insurance is maintained in the amounts and manner usually maintained in connection with wastewater systems similar to the Wastewater System and is, in the opinion of an accredited actuary, actuarially sound.

All policies of insurance required to be maintained in the Installment Purchase Agreement will, to the extent reasonably obtainable, provide that the Authority and the Trustee will be given 30 days' written notice of any intended cancellation thereof or reduction of coverage provided thereby.

**Accounting Records: Financial Statements and Other Reports.** The City will keep appropriate accounting records in which complete and correct entries will be made of all transactions relating to the Wastewater System, which records will be available for inspection by the Authority and the Trustee at reasonable hours and under reasonable conditions.

The City will prepare and file with the Authority and the Trustee annually after the close of each Fiscal Year, the following:

- (1) within 270 days financial statements of the Sewer Revenue Fund for the preceding Fiscal Year prepared in accordance with generally accepted accounting principles, together with an Accountant's Report thereon;
- (2) within 45 days, a detailed report as to all insurance policies maintained and self-insurance programs maintained by the City with respect to the Wastewater System as of the close of such Fiscal Year, including the names of the insurers which have issued the policies and the amounts thereof and the property or risks covered thereby; and
- (3) the City will furnish a copy of the financial statements referred to above to any Owner of the Bonds requesting a copy thereof.

**Payment of Taxes and Compliance with Governmental Regulations.** The City will pay and discharge all taxes, assessments and other governmental charges which may be lawfully imposed upon the Wastewater System or any part thereof or upon the System Revenues when the same will become due. The City will duly observe and conform with all valid regulations and requirements of any governmental authority relative to the operation of the Wastewater System or any part thereof, but the City will not be required to comply with any regulations or requirements so long as the validity or application thereof will be contested in good faith.

**Collection of Rates and Charges. No Free Service.** The City will have in effect at all times rules and regulations for the payment of bills for Wastewater Services, and that such regulations will provide that where the City furnishes water to the property receiving Wastewater Service, the Wastewater Service charges shall be collected together with the water rates upon the same bill providing for a due date and a delinquency date for each bill. In each case where such bill remains unpaid in whole or in part after it becomes delinquent, the City may disconnect such premises from the water service, and such premises will not thereafter be reconnected to the water service except in accordance with City operating rules and regulations governing such situations of delinquency. The City will not permit any part of the Wastewater System or any facility thereof to be used or taken advantage of free of charge by any corporation, firm or person, or by any public agency (including the United States of America, the State and any city, county, district, political subdivision, public corporation or agency of any thereof).

**Eminent Domain Proceeds.** If all or any part of the Wastewater System will be taken by eminent domain proceedings, then subject to the provisions of any Authorizing Ordinance, the Net Proceeds thereof will be applied to the replacement of the property or facilities so taken, unless the City determines that such property or facility is not necessary to the efficient operation of the Wastewater System and therefore determines not to replace such property or facilities. Any Net Proceeds of such award not applied to replacement or remaining after such work has been completed will be deposited in the Sewer Revenue Fund and be available for other proper uses of funds deposited in the Sewer Revenue Fund.

**Tax Covenants.** There shall be included in each Supplement relating to Tax-Exempt Installment Payment Obligations such covenants as are deemed necessary or appropriate by Bond Counsel for the purpose of assuring that interest on such Installment Payment Obligations shall be excluded from gross income under Section 103 of the Code.

**Operate Wastewater System.** The City will operate the Wastewater System in an efficient and economical manner, provided that the City may remove from the service on a temporary or permanent basis such part or parts of the Wastewater System so long as (a) Net System Revenues are equal to 120% of the Debt Service for the then current Fiscal Year and for each Fiscal Year thereafter to and including the Fiscal Year during which the last Installment Payment is due as evidenced by an engineer's report on file with the City, and (b) the City will have filed with the Trustee an opinion of nationally recognized bond counsel to the effect that the removal of such part or parts of the Wastewater System will not adversely affect the exclusion from gross income for federal income tax purposes of the interest on Tax-Exempt Installment Payment Obligations.

#### **Prepayment of Installment Payments**

Provisions may be made in any Supplement for the prepayment of Installment Payments, in whole or in part, in such multiples and in such order of maturity and from funds of any source, and with such prepayment premiums and other terms as are specified in the Supplement. Said Supplement shall also provide for any notices to be given relating to such prepayment.

#### **Events of Default and Remedies of the Authority**

The following will be "events of default" under the Installment Purchase Agreement:

- (a) failure in the due and punctual payment of or on account of any Parity Obligation as the same will become due and payable;
- (b) failure by the City in the performance of any of the agreements or covenants required to be performed by it in the Installment Purchase Agreement (other than as specified in (a) above), and such default will have continued for 60 days after the City has been given notice in writing of such default by the Authority;
- (c) if any Event of Default specified in any Supplement, Authorizing Ordinance or Issuing Instrument shall have occurred and be continuing; or

(d) if the City files a petition or answer seeking arrangement or reorganization under the federal bankruptcy laws or any other applicable law of the United States of America or any state therein, or if a court of competent jurisdiction will approve a petition filed with or without the consent of the City seeking arrangement or reorganization under the federal bankruptcy laws or any other applicable law of the United States of America or any state therein, or if under the provisions of any other law for the relief or aid of debtors any court of competent jurisdiction will assume custody or control of the City or of the whole or any substantial part of its property;

then and in each case during the continuance of such event of default, the Authority shall upon the written request of the Owners of 25 % or more of the aggregate principal amount of all Series of Parity Installment Obligations Outstanding, voting collectively as a single class, by written notice to the City, declare the entire unpaid principal amount thereof and the accrued interest thereon to be due and payable immediately, and upon any such declaration the same shall become immediately due and payable; provided, that with respect to a Series of Parity Installment Obligations which is credit enhanced by Credit Support, acceleration will not be effective unless the declaration is consented to by the related Credit Provider and, provided further, that nothing in the Installment Purchase Agreement shall affect the rights of the parties to a Qualified Swap Agreement to terminate such Qualified Swap Agreement. If at any time after the entire principal amount of all Series of Parity Installment Obligations and the accrued interest thereon have been so declared due and payable and before any judgment or decree for the payment of the moneys due shall have been obtained or entered, the City will deposit with the Authority a sum sufficient to pay the unpaid principal amount of all such Series of Parity Installment Obligations and the unpaid payments of any other Parity Obligations referred to in clause (a) above due prior to such declaration and the accrued interest thereon, with interest on such overdue installments, and the reasonable expenses of the Authority, and any and all other defaults known to the Authority, shall have been made good or cured to the satisfaction of the Authority or provision deemed by the Authority to be adequate shall have been made therefor, then the Authority, by written notice to the City, may rescind and annul such declaration and its consequences.

#### **Discharge of Obligations**

If (i) the City will pay or cause to be paid or there will otherwise be paid to the Owners all Outstanding Installment Payment Obligations of a Series the interest thereon and the principal thereof and the redemption premiums, if any, thereon or if all Outstanding Obligations will be deemed to have been paid at the times and in the manner stipulated in the applicable Issuing Instrument, and (ii) the transfer of ownership of substantially all of the Metropolitan System, as contemplated by the Installment Purchase Agreement will have occurred, then all agreements, covenants and other obligations of the City under the Installment Purchase Agreement will thereupon cease, terminate and become void and be discharged and satisfied except for the obligation of the City to pay or cause to be paid all sums due thereunder.

#### **Amendments**

The Installment Purchase Agreement may be amended with respect to a Series of Installment Payment Obligations in writing as may be mutually agreed by the City and the Authority, with the written consent of any Credit Provider which is providing insurance until the final maturity or payment in full of one or more maturities of such Installment Payment Obligations, or any other Credit Provider for such Installment Payment Obligations and the Owners of 60% or more in aggregate principal amount of such Installment Payment Obligations then Outstanding, provided that no such amendment will (i) extend the payment date of any Installment Payment, or reduce the amount of any Installment Payment without the prior written consent of the Owner of each Obligation so affect, (ii) reduce the percentage of Installment Payment Obligations the consent of the Owners of which is required for the execution of any amendment of the Installment Purchase Agreement, or (iii) amend the provisions of transfer of the Metropolitan System Components without an unqualified opinion of nationally recognized Bond Counsel to the effect that such amendment does not adversely affect the exclusion of the interest portion of the Installment Payments received by the Owners of Tax-Exempt Installment Payment Obligations from gross income under Section 103 of the Code. Notwithstanding the foregoing, so long as the City has any obligations under a Qualified Swap Agreement, it will not amend or modify, or consent to the amendment or modification of, the Installment Purchase Agreement that would in any way adversely affect (A) the rights of a counterparty to a Qualified Swap Agreement under the Installment Purchase Agreement, or (B) the obligations of the City under the



Installment Purchase Agreement to such a contrary without the prior written consent of such Qualified Swap Provider.

With the written consent of any Credit Provider, the Installment Purchase Agreement and the rights and obligations of the City and the Authority thereunder may also be amended, without the written consent of any Owner of Installment Obligations, but only to the extent permitted by law and only upon receipt of an unqualified opinion of nationally recognized Bond Counsel selected by the City and approved by the Authority to the effect that such amendment or supplement is permitted by the provisions of the Installment Purchase Agreement and is not inconsistent therewith and does not adversely affect the exclusion of the interest portion of the Installment Payments received by the Owners from gross income for federal tax purposes, and only (i) to add to the covenants and agreements of the Authority or the City or to surrender any reserved right or power to or conferred upon the Authority or the City, and which will not adversely affect the interests of the Owners of the Installment Payment Obligations; (ii) to cure, correct or supplement any ambiguous or defective provision, as the Authority or the City may deem necessary or desirable and which will not adversely affect the interests of the Owners of the Installment Payment Obligations; and (iii) to make such other amendments or modifications which will not materially adversely affect the interests of the Owners of the Installment Payment Obligations.

### 1995-1 Supplement

#### Additional Covenant relating to Tax Exemption.

The City will not directly or indirectly use or permit the use of any proceeds of the Component Obligation Series 1995 or any other funds of the City or of the Project or take or omit to take any action that would cause the Component Obligation Series 1995 to be "private activity bonds" within the meaning of Section 141 of the Code, or obligation which are "federally guaranteed" within the meaning of Section 149(b) of the Code.

The City covenants that it will not take any action, or fail to take any action, if such action or failure to take action would adversely affect the exclusion from gross income of the interest represented by the Component Obligation Series 1995 under Section 103 of the Code. The City will not directly or indirectly use or permit the use of any proceeds of the Component Obligation Series 1995 or any other funds of the City, or take or omit to take any action, that would cause the Component Obligation Series 1995 to be "arbitrage bonds" within the meaning of Section 148(a) of the Code. To that end, the City will comply with all requirements of Section 148 of the code to the extent applicable to the Component Obligation Series 1995. In the event that at any time the City is of the opinion that for purposes of this Section it is necessary to restrict or limit the yield on the investment of any moneys held by the Trustee under the Indenture or otherwise, the City shall so instruct the Trustee in writing, and shall cause the Trustee to take such action as may be necessary in accordance with such instructions.

Without limiting the generality of the foregoing, the City agrees that there shall be paid from time to time all amounts required to be rebated to the United States of America pursuant to Section 148(f) of the Code and any temporary, proposed or final Treasury Regulations as may be applicable to the Component Obligation Series 1995 from time to time. This covenant shall survive payment in full or defeasance of the Component Obligation Series 1995. The City specifically covenants to pay or cause to be paid to the United States of America at the times and in the amounts determined under this Section the Rebate Requirement, as described in the Tax Certificate and to otherwise comply with the provisions of the Tax Certificate executed by the City in connection with the execution and delivery of the Component Obligation Series 1995.

Notwithstanding any provision of the 1995-1 Supplement, if the City shall provide to the Trustee an opinion of nationally recognized Bond Counsel to the effect that any action required under the tax covenants contained in the 1995-1 Supplement is no longer required, or to the effect that some further action is required, to maintain the exclusion from gross income of the interest on the Component Obligation Series 1995 pursuant to Section 103 of the Code, the City may rely conclusively on such opinion in complying with the provisions thereof, and the covenants thereunder shall be deemed to be modified to that extent.

Continuing Disclosure. The City covenants and agrees that it will comply with any carry out all of the provisions of the Continuing Disclosure Agreement. Notwithstanding any other provision of the 1995-1 Supplement,

failure of the City to comply with the Continuing Disclosure Agreement shall not be considered a default of any kind under the 1995-1 Supplement or the Installment Purchase Agreement; however, the Trustee may (and, at the request of any Participating Underwriter or the Owners of at least twenty-five percent (25 %) aggregate principal amount in Component Obligation Series 1995, shall) or any Owner or Beneficial Owner may take such actions as may be necessary and appropriate, including seeking specific performance by court order, to cause the City to comply with its obligations under the 1995-1 Supplement. For purposes of this provision, "Beneficial Owner" means any person which has the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Component Obligation Series 1995 (including persons holding Component Obligation Series 1995 through nominees, depositories or other intermediaries).

## **THE CONTINUING DISCLOSURE AGREEMENT**

### **Provision of Annual Reports**

The City shall, or shall cause the Dissemination Agent to, not later than 270 days after the end of the City's fiscal year (presently June 30), commencing with the report for the 1995-96 Fiscal Year, provide to each Repository an Annual Report which is consistent with the requirements of the Continuing Disclosure Agreement. In each case, the Annual Report may be submitted as a single document or as separate documents comprising a package, and may cross-reference other information as provided in the Continuing Disclosure Agreement; provided that the audited financial statements of the City may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. If the City's fiscal year changes, it shall give notice of such change in the same manner as for a Listed Event.

Not later than fifteen (15) Business Days prior to the date specified in the Continuing Disclosure Agreement for providing the Annual Report to the Repositories, the City shall provide the Annual Report to the Dissemination Agent and the Trustee (if the Trustee is not the Dissemination Agent). If by such date the Trustee has not received a copy of the Annual Report, the Trustee shall contact the City and the Dissemination Agent to determine if the City is in compliance with the Continuing Disclosure Agreement.

If the Trustee is unable to verify that an Annual Report has been provided to the Repositories by the date required in the Continuing Disclosure Agreement, the Trustee shall send a notice to each Repository and the Municipal Securities Rulemaking Board.

The Dissemination Agent shall:

- (i) determine each year prior to the date for providing the Annual Report the name and address of each National Repository and the State Repository, if any; and
- (ii) file a report with the City, the Authority and (if the Dissemination Agent is not the Trustee) the Trustee certifying that the Annual Report has been provided pursuant to the Continuing Disclosure Agreement, stating the date it was provided, and listing all the Repositories to which it was provided.

### **Content of Annual Reports**

The City's Annual Report shall contain or include by reference the following:

1. The audited financial statements of the City for the prior fiscal year, prepared in accordance with generally accepted accounting principles as promulgated from time to time by the Financial Accounting Standards Board or as otherwise required by applicable State law. If the City's audited financial statements are not available by the time the Annual Report is required to be filed, the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained in the final Official Statement, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available.

2. An update of the information contained in Table 2 of the Official Statement for the most recently completed fiscal year.
3. An update of the information contained in Table 3 of the Official Statement for the most recently completed fiscal year (exclusive of the information contained under the column heading "Estimated Population").
4. An update of the information contained in Table 4 of the Official Statement for the most recently completed fiscal year.
5. An update of the information contained in Table 5 of the Official Statement for the most recently completed fiscal year.
6. An update of the information contained in Table 6 of the Official Statement for the five most recently completed fiscal years.
7. An update of the information contained in Table 7 of the Official Statement for the most recently completed fiscal year.
8. An update of the information contained in Table 8 of the Official Statement for the five most recently completed fiscal years.
9. An update of the information contained in Table 9 of the Official Statement for the five most recently completed fiscal years.
10. An update of the information contained in Table 10 of the Official Statement for the five most recently completed fiscal years.
11. An update of the information contained in Table 11 of the Official Statement for the five most recently completed fiscal years.
12. Information contained in Table 12 of the Official Statement will be available in the City's audited financial statements.
13. Information contained in Table 13 of the Official Statement will be available in Exhibit D of the City's audited financial statements.
14. Information contained in Table 14 of the Official Statement will be available in Schedules F-1 and F-2 of the City's audited financial statements.
15. An update of the information contained in the Official Statement under the heading "LABOR RELATIONS" for the most recently completed fiscal year.
16. An update of the information contained in the Official Statement in the third paragraph under the heading "PENSION PLAN" for the most recently completed fiscal year.
17. An update of the information contained in Table 15 of the Official Statement for the five most recently completed fiscal years.
18. An update of the information contained in the Official Statement under the heading "INVESTMENT OF FUNDS - Pool Liquidity and Other Characteristics" and contained in Table 16 of the Official Statement for the most recently completed fiscal year.

## **Reporting of Significant Events**

The City shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the 1995 Bonds, if material:

1. principal and interest payment delinquencies;
2. non-payment related defaults;
3. modifications to rights of Owners of the 1995 Bonds;
4. optional, contingent or unscheduled bond calls;
5. defeasances;
6. rating changes;
7. adverse tax opinions or events affecting the tax-exempt status of the 1995 Bonds;
8. unscheduled draws on debt service reserves reflecting financial difficulties.
9. unscheduled draws on credit enhancements reflecting financial difficulties;
10. substitution of credit or liquidity providers, or their failure to perform; and
11. release, substitution or sale of property securing repayment of the 1995 Bonds.

The Dissemination Agent shall, within one (1) Business Day of obtaining actual knowledge of the occurrence of any of the Listed Events contact the Disclosure Representative, inform such person of the event, and request that the City promptly notify the Dissemination Agent in writing whether or not to report the event pursuant to the Continuing Disclosure Agreement.

Whenever the City obtains knowledge of the occurrence of a Listed Event, the City shall as soon as possible determine if such event would be material under applicable federal securities laws.

If the City has determined that knowledge of the occurrence of a Listed Event would be material under applicable federal securities laws, the City shall promptly notify the Dissemination Agent in writing. Such notice shall instruct the Dissemination Agent to report the occurrence pursuant to the Continuing Disclosure Agreement.

If in response to a request under the Continuing Disclosure Agreement, the City determines that the Listed Event would not be material under applicable federal securities laws, the City shall so notify the Dissemination Agent in writing and instruct the Dissemination Agent not to report the occurrence.

If the Dissemination Agent has been instructed by the City to report the occurrence of a Listed Event, the Dissemination Agent shall file a notice of such occurrence with the Municipal Securities Rulemaking Board and the Repositories with a copy to the City. Notwithstanding the foregoing, notice of optional, contingent or unscheduled bond calls or defeasances need not be given under the Continuing Disclosure Agreement any earlier than the notice (if any) of the underlying event is given to the Owners of affected 1995 Bonds pursuant to the Indenture.

## **Termination of Reporting Obligation**

The City's obligations under the Continuing Disclosure Agreement shall terminate upon the legal defeasance, prior redemption or payment in full of all of the 1995 Bonds. If the City's obligations under the Installment Purchase Agreement are assumed in full by some other entity, such person shall be responsible for compliance with the Continuing Disclosure Agreement in the same manner as if it were the City and the City shall

have no further responsibility under the Continuing Disclosure Agreement. If such termination or substitution occurs prior to the final maturity of the 1995 Bonds, the City shall give notice of such termination or substitution in the same manner as for a Listed Event.

### **Dissemination Agent**

The City may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under the Continuing Disclosure Agreement, and may discharge any such agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the City pursuant to the Continuing Disclosure Agreement. The Trustee shall be the initial Dissemination Agent.

### **Amendment; Waiver**

Notwithstanding any other provision of the Continuing Disclosure Agreement, the City and the Dissemination Agent may amend the Continuing Disclosure Agreement (and the Dissemination Agent shall agree to any amendment so requested by the City) and any provision of the Continuing Disclosure Agreement may be waived, provided that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions concerning the provision and content of Annual Reports or the notice of Listed Events, it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to the 1995 Bonds, or the type of business conducted;

(b) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the 1995 Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver either (i) is approved by the Owners of the 1995 Bonds in the same manner as provided in the Indenture for amendments to the Indenture with the consent of Owners, or (ii) does not, in the opinion of the Trustee or nationally recognized bond counsel, materially impair the interests of the Owners or Beneficial Owners of the 1995 Bonds.

In the event of any amendment or waiver of a provision of the Continuing Disclosure Agreement, the City shall describe such amendment in the next Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or, in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by the City. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (i) notice of such change shall be given in the same manner as for a Listed Event, and (ii) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

### **Additional Information**

Nothing in the Continuing Disclosure Agreement shall be deemed to prevent the City from disseminating any other information, using the means of dissemination set forth in the Continuing Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by the Continuing Disclosure Agreement. If the City chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by the Continuing Disclosure Agreement, the City shall have no obligation under the Continuing Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

## **Default**

In the event of a failure of the City or the Dissemination Agent to comply with any provision of the Continuing Disclosure Agreement, the Trustee may (and, at the request of any Participating Underwriter or the Owners of at least 25 % aggregate principal amount of Outstanding 1995 Bonds, shall), or any Owner or Beneficial Owner of the 1995 Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the City or the Dissemination Agent, as the case may be, to comply with its obligations under the Continuing Disclosure Agreement. A default under the Continuing Disclosure Agreement shall not be deemed an Event of Default under the Indenture or the Installment Purchase Agreement, and the sole remedy under the Continuing Disclosure Agreement in the event of any failure of the City or the Dissemination Agent to comply with the Continuing Disclosure Agreement shall be an action to compel performance.

## **Beneficiaries**

The Continuing Disclosure Agreement shall inure solely to the benefit of the Authority, the City, the Trustee, the Dissemination Agent, the Participating Underwriters, the Bond Insurer and the Owners and Beneficial Owners from time to time of the 1995 Bonds, and shall create no rights in any other person or entity.

## **APPENDIX F**

### **FORM OF CO-BOND COUNSEL OPINION**

APPENDIX F

FORM OF CO-BOND COUNSEL OPINION

Orrick, Herrington & Sutcliffe  
777 South Figueroa Street  
Suite 3200  
Los Angeles, California 90017

Lofton, De Lancie & Nelson  
505 Montgomery  
Suite 1550  
San Francisco, California 94111

[Date of Issuance]

Public Facilities Financing Authority  
of the City of San Diego  
202 C Street  
San Diego, California 92101

City of San Diego  
202 C Street  
San Diego, California 92101

Public Facilities Financing Authority  
of the City of San Diego  
Sewer Revenue Bonds, Series 1995  
(Payable Solely from Installment Payments  
Secured by Wastewater System Net Revenues)  
(Final Opinion)

Ladies and Gentlemen:

We have acted as co-bond counsel in connection with the issuance by the Public Facilities Financing Authority of the City of San Diego (the "Authority") of \$350,000,000 aggregate principal amount of its Sewer Revenue Bonds, Series 1995 (Payable Solely from Installment Payments Secured by Wastewater System Net Revenues) (the "Bonds"), issued pursuant to an Indenture, dated as of September 1, 1993 (the "Original Indenture"), between the Authority and State Street Bank and Trust Company of California, N.A., as trustee (the "Trustee"), as supplemented by the First Supplemental Indenture, dated as of May 1, 1994 (the "First Supplemental Indenture") and the Second Supplemental Indenture, dated as of December 1, 1995 (the "Second Supplemental Indenture," and together with the Original Indenture and the First Supplemental Indenture, the "Indenture"), each between the Authority and the Trustee. The Bonds are payable from installment payments payable by the City of San Diego (the "City") pursuant to a Master Installment Purchase Agreement, dated as of September 1, 1993 (the "Master Installment Purchase Agreement"), between the Authority and the City, as supplemented by the 1995-1 Supplement to the Master Installment Purchase Agreement, dated as of December 1, 1995, between the City and the Authority (the "1995-1 Supplement," and together with the Master Installment Purchase Agreement and any other Supplements thereto, the "Installment Purchase Agreement"), under which the Authority sells to the City portions of a wastewater system. Capitalized terms not otherwise defined herein shall have the meanings set forth in the Indenture and the Installment Purchase Agreement.



In such connection, we have reviewed the Indenture, the Installment Purchase Agreement, the Tax Certificate, dated the date hereof (the "Tax Certificate"), certificates of the City, the Authority, the Trustee and others, opinions of the City Attorney with respect to the Authority and the City, and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein.

Certain agreements, requirements and procedures contained or referred to in the Indenture, the Installment Purchase Agreement, the Tax Certificate and other relevant documents may be changed and certain actions (including, without limitation, defeasance of the Bonds) may be taken or omitted under the circumstances and subject to the terms and conditions set forth in such documents. No opinion is expressed herein as to any Bond or the interest thereon if any such change occurs or action is taken or omitted upon the advice or approval of counsel other than ourselves.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after the date hereof. We have not undertaken to determine or to inform any person, whether any such actions are taken or omitted or events do occur. We disclaim any obligation to update this opinion. We have assumed the genuineness of all documents and signatures presented to us (whether as originals or as copies) and the due and legal execution and delivery thereof by, and validity against, any parties other than the Authority and the City. We have not undertaken to verify independently, and have assumed, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. Furthermore, we have assumed compliance with all covenants and agreements contained in the Indenture, the Installment Purchase Agreement and the Tax Certificate, including without limitation covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the Bonds to be included in gross income for federal income tax purposes. We call attention to the fact that the rights and obligations under the Bonds, the Indenture, the Installment Purchase Agreement and the Tax Certificate may be subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against public entities in the State of California. We express no opinion with respect to any indemnification, contribution, choice of law, choice of forum or waiver provisions contained in the foregoing documents. Finally, we undertake no responsibility for the accuracy, completeness or fairness of the Official Statement or other offering material related to the Bonds and express no opinion with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The Bonds constitute the valid and binding limited obligations of the Authority.
2. The Bonds are special obligations of the Authority and are payable solely from Revenues (as such term is defined in the Indenture), which Revenues include Installment Payments pursuant to the Installment Purchase Agreement.
3. The Indenture and the Installment Purchase Agreement have been duly executed and delivered by, and constitute the valid and binding obligations of, the Authority. The Indenture creates a valid pledge, to secure the payment of the principal of and interest on the Bonds, of the Revenues and any other amounts (including proceeds of the sale of the Bonds) held by the Trustee in any fund or account established pursuant to the Indenture, except the Rebate Fund, subject to the provisions of the Indenture permitting the application thereof for other purposes and on the terms and conditions set forth therein.

Public Facilities Financing Authority  
City of San Diego  
[Date of Issuance]

4. The Installment Purchase Agreement has been duly executed and delivered by, and constitutes the valid and binding obligation of, the City. The Installment Purchase Agreement creates a valid pledge of Net System Revenues to secure the payment of Installment Payments to the Authority, on the terms and conditions set forth therein.

5. Interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 and is exempt from California personal income taxes. The difference, if any, between the initial offering price to the public (excluding bond houses and brokers) at which a substantial amount of the Bonds is sold and the amount payable at the maturity thereof constitutes "original issue discount" for purposes of federal income taxes and State of California personal income taxes. Original issue discount is treated as interest that is excluded from gross income for federal income tax purposes and is exempt from California personal income taxes to the extent properly allocable to each owner thereof. Interest (including original issue discount) on the Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, although we observe that interest (including original issue discount) on the Bonds is included in adjusted current earnings when calculating corporate alternative minimum taxable income. We express no opinion regarding other tax consequences related to the ownership or disposition of, or the accrual or receipt of interest on, the Bonds.

Faithfully yours,

Respectfully submitted,

ORRICK, HERRINGTON & SUTCLIFFE

LOFTON, DE LANCIE & NELSON

per

**APPENDIX G**

**SPECIMEN MUNICIPAL BOND INSURANCE POLICY**

Financial Guaranty Insurance  
Company  
115 Broadway  
New York, NY 10006  
(212) 312-3000  
800 352-0001



A GE Capital Company

## Municipal Bond New Issue Insurance Policy

Issuer:

Policy Number:

Control Number:

Bonds:

Premium:

Financial Guaranty Insurance Company ("Financial Guaranty"), a New York stock insurance company, in consideration of the payment of the premium and subject to the terms of this Policy, hereby unconditionally and irrevocably agrees to pay to State Street Bank and Trust Company, N.A., or its successor, as its agent (the "Fiscal Agent"), for the benefit of Bondholders, that portion of the principal and interest on the above-described debt obligations (the "Bonds") which shall become Due for Payment but shall be unpaid by reason of Nonpayment by the Issuer.

Financial Guaranty will make such payments to the Fiscal Agent on the date such principal or interest becomes Due for Payment or on the Business Day next following the day on which Financial Guaranty shall have received Notice of Nonpayment, whichever is later. The Fiscal Agent will disburse to the Bondholder the face amount of principal and interest which is then Due for Payment but is unpaid by reason of Nonpayment by the Issuer but only upon receipt by the Fiscal Agent, in form reasonably satisfactory to it, of (i) evidence of the Bondholder's right to receive payment of the principal or interest Due for Payment and (ii) evidence, including any appropriate instruments of assignment, that all of the Bondholder's rights to payment of such principal or interest Due for Payment shall thereupon vest in Financial Guaranty. Upon such disbursement, Financial Guaranty shall become the owner of the Bond, appurtenant coupon or right to payment of principal or interest on such Bond and shall be fully subrogated to all of the Bondholder's rights thereunder, including the Bondholder's right to payment thereof.

This Policy is non-cancellable for any reason. The premium on this Policy is not refundable for any reason, including the payment of the Bonds prior to their maturity. This Policy does not insure against loss of any prepayment premium which may at any time be payable with respect to any Bond.

As used herein, the term "Bondholder" means, as to a particular Bond, the person other than the Issuer who, at the time of Nonpayment, is entitled under the terms of such Bond to payment thereof. "Due for Payment" means, when referring to the principal of a Bond, the stated maturity date thereof or the date on which the same shall have been duly called for mandatory sinking fund redemption and does not refer to any earlier date on which payment is due by reason of call for redemption (other than by mandatory sinking fund redemption), acceleration or other advancement of maturity and means, when referring to interest on a

FGIC is a registered service mark used by Financial Guaranty Insurance Company under license from its parent company, FGIC Corporation.

Financial Guaranty Insurance  
Company  
115 Broadway  
New York, NY 10006  
(212) 312-3000  
800 352-0001



A GE Capital Company

## Municipal Bond New Issue Insurance Policy

Bond, the stated date for payment of interest. "Nonpayment" in respect of a Bond means the failure of the Issuer to have provided sufficient funds to the paying agent for payment in full of all principal and interest Due for Payment on such Bond. "Notice" means telephonic or telegraphic notice, subsequently confirmed in writing, or written notice by registered or certified mail, from a Bondholder or a paying agent for the Bonds to Financial Guaranty. "Business Day" means any day other than a Saturday, Sunday or a day on which the Fiscal Agent is authorized by law to remain closed.

In Witness Whereof, Financial Guaranty has caused this Policy to be affixed with its corporate seal and to be signed by its duly authorized officer in facsimile to become effective and binding upon Financial Guaranty by virtue of the countersignature of its duly authorized representative.

A handwritten signature in cursive script, likely belonging to the President of Financial Guaranty Insurance Company.

President

Effective Date:

Authorized Representative

State Street Bank and Trust Company, N.A., acknowledges that it has agreed to perform the duties of Fiscal Agent under this Policy.

A handwritten signature in cursive script, likely belonging to the Authorized Officer of State Street Bank and Trust Company, N.A.

Authorized Officer

Financial Guaranty Insurance  
Company  
115 Broadway  
New York, NY 10006  
(212) 312-3000  
(800) 352-0001



A GE Capital Company

## Endorsement To Financial Guaranty Insurance Company Insurance Policy

Policy Number:

Control Number:

It is further understood that the term "Nonpayment" in respect of a Bond includes any payment of principal or interest made to a Bondholder by or on behalf of the issuer of such Bond which has been recovered from such Bondholder pursuant to the United States Bankruptcy Code by a trustee in bankruptcy in accordance with a final, nonappealable order of a court having competent jurisdiction.

NOTHING HEREIN SHALL BE CONSTRUED TO WAIVE, ALTER, REDUCE OR AMEND COVERAGE IN ANY OTHER SECTION OF THE POLICY. IF FOUND CONTRARY TO THE POLICY LANGUAGE, THE TERMS OF THIS ENDORSEMENT SUPERSEDE THE POLICY LANGUAGE.

In Witness Whereof, Financial Guaranty has caused this Endorsement to be affixed with its corporate seal and to be signed by its duly authorized officer in facsimile to become effective and binding upon Financial Guaranty by virtue of the countersignature of its duly authorized representative.

President

Effective Date:

Authorized Representative

Acknowledged as of the Effective Date written above:

Authorized Officer  
State Street Bank and Trust Company, N.A., as Fiscal Agent

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